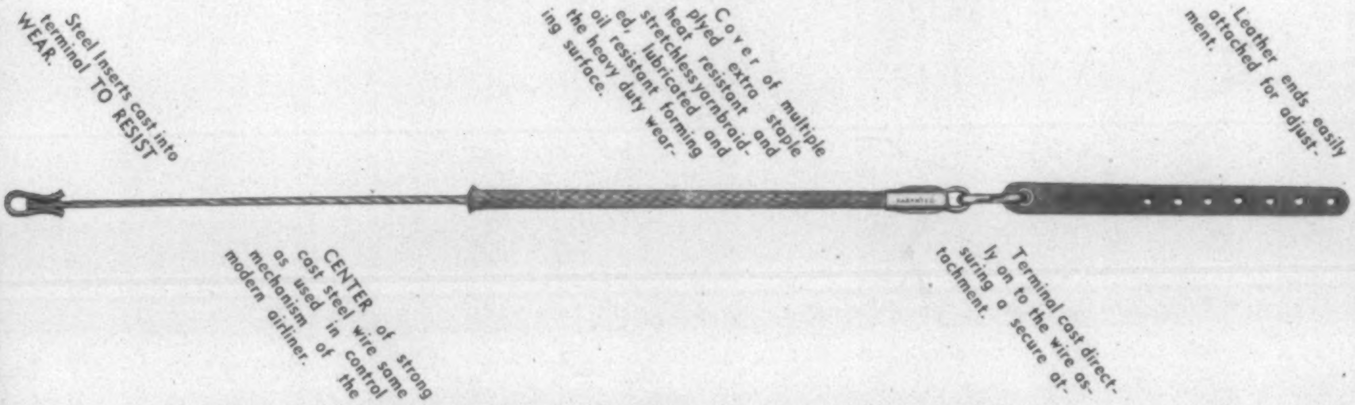
TEXTILE BULLETIN

Vol. 57 November 15, 1939 No. 6

JACOBS **CASTEEL** DOBBY CORDS
(PATENTED)

One Resilient Mass of Metal from End to End.


Steel Inserts cast into terminal TO RESIST WEAR.
Cover of multiple plyed extra staple heat resistant and stretchless yarnbraided, lubricated and oil resistant forming the heavy duty wearing surface.
Leather ends easily attached for adjustment.
CENTER of strong cast steel wire same as used in control mechanism of the modern airliner.
Terminal cast directly on to the wire assuring a secure attachment.

FOUR Casteel Dobby cords will support an automobile

CASTEEL CORDS reduce smashes from Dobby Cord Failures

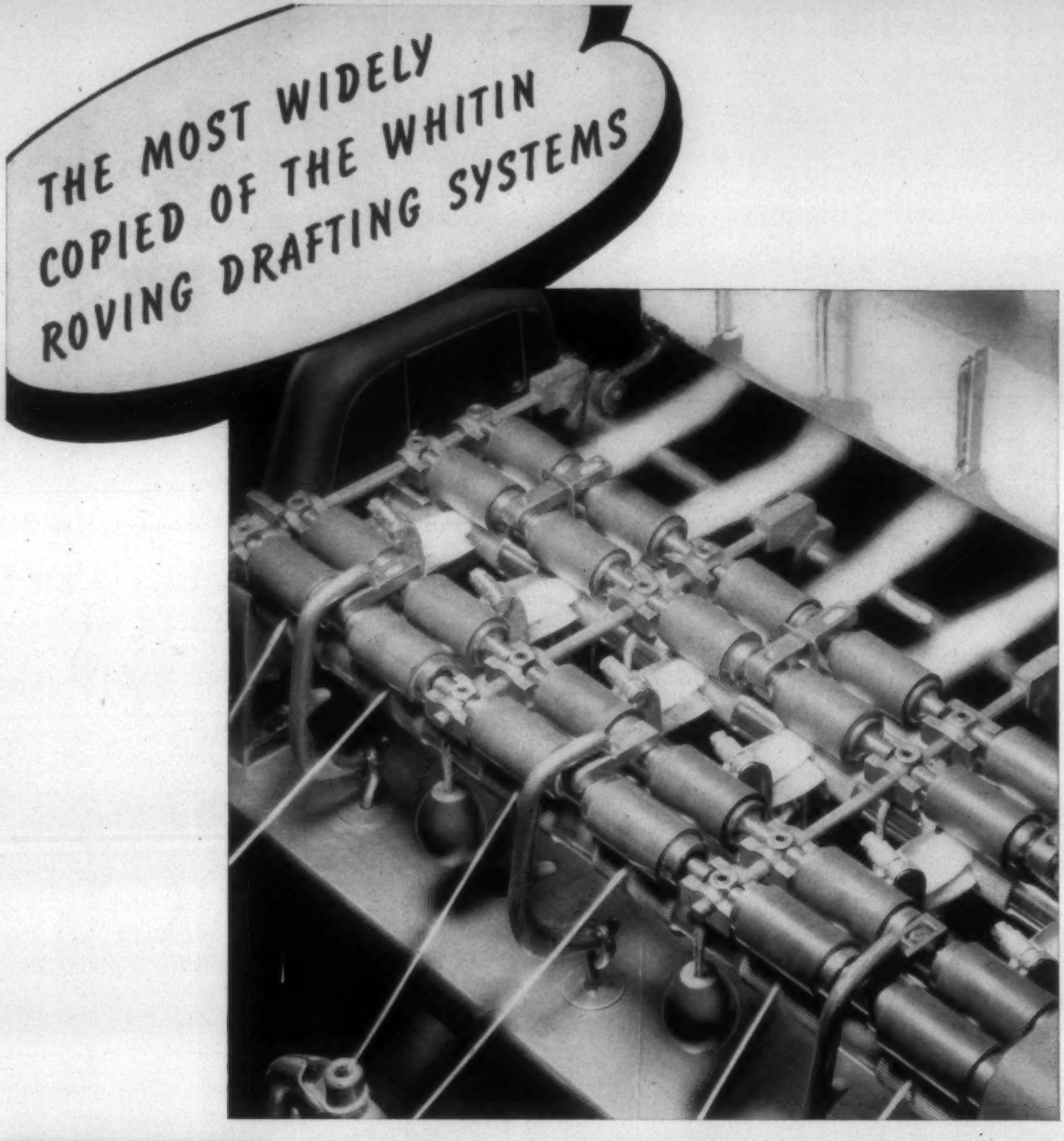
Operating tests show Casteel Cords are now a complete success

Made in No. 8 only (1/4" diameter).

(A "medal" to Dan Griffin, our Southern Service Manager, for furnishing the idea for this "ad.")

E. H. JACOBS MFG. CO.

CHARLOTTE, N. C. – DANIELSON, CONN.



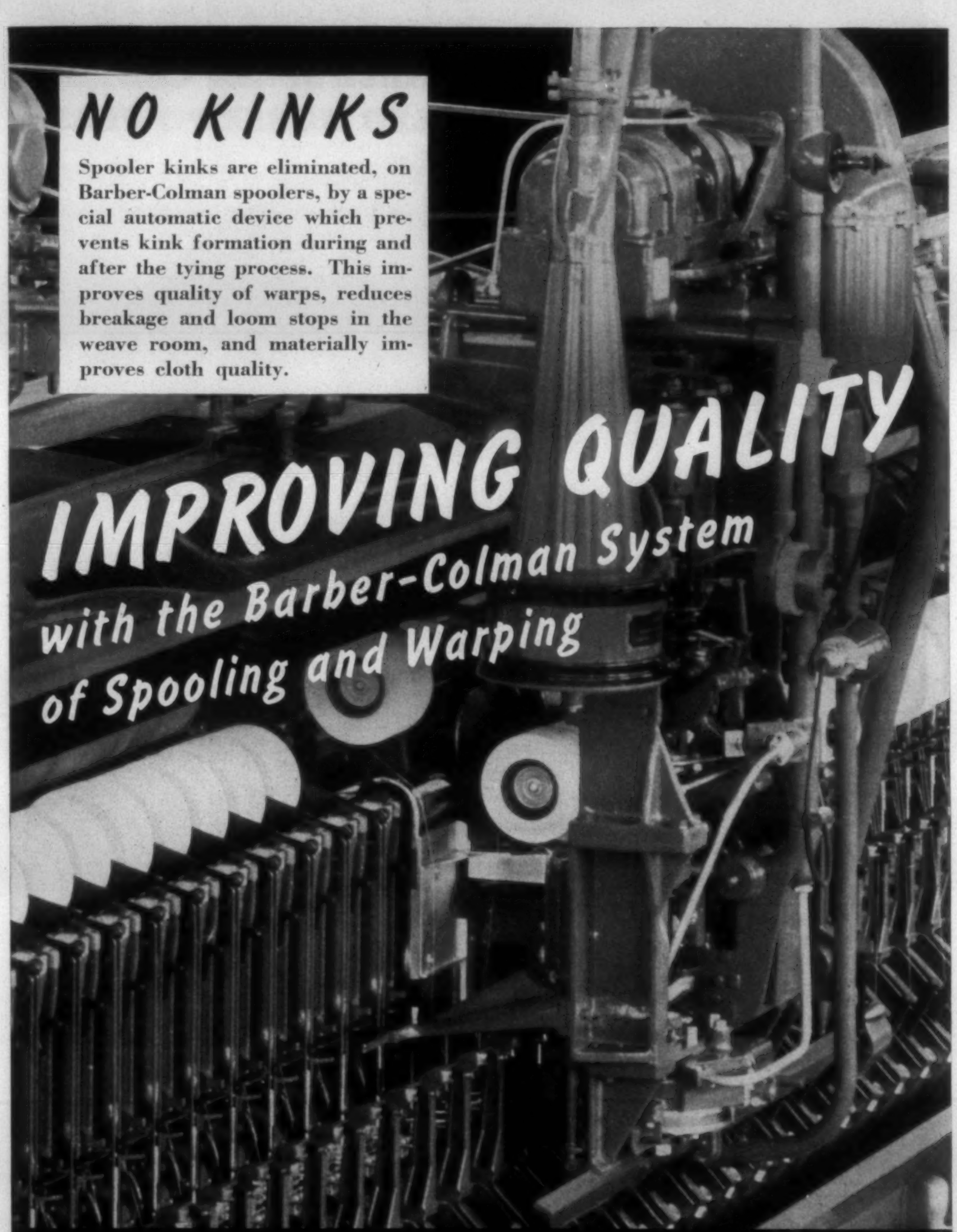
SIMPLE
CLEAN
EFFECTIVE

WHITIN INTER-DRAFT ROVING FOR DRAFTS BETWEEN 10 AND 18

Do you make 1.20 to 2.50 hank roving? Let us tell you about some of our large installations on work similar to yours.

WHITIN MACHINE WORKS
WHITINSVILLE, MASS., U. S. A.
CHARLOTTE, N. C. **ATLANTA, GA.**

Published Semi-Monthly by Clark Publishing Company, 218 West Morehead Street, Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.



NO KINKS

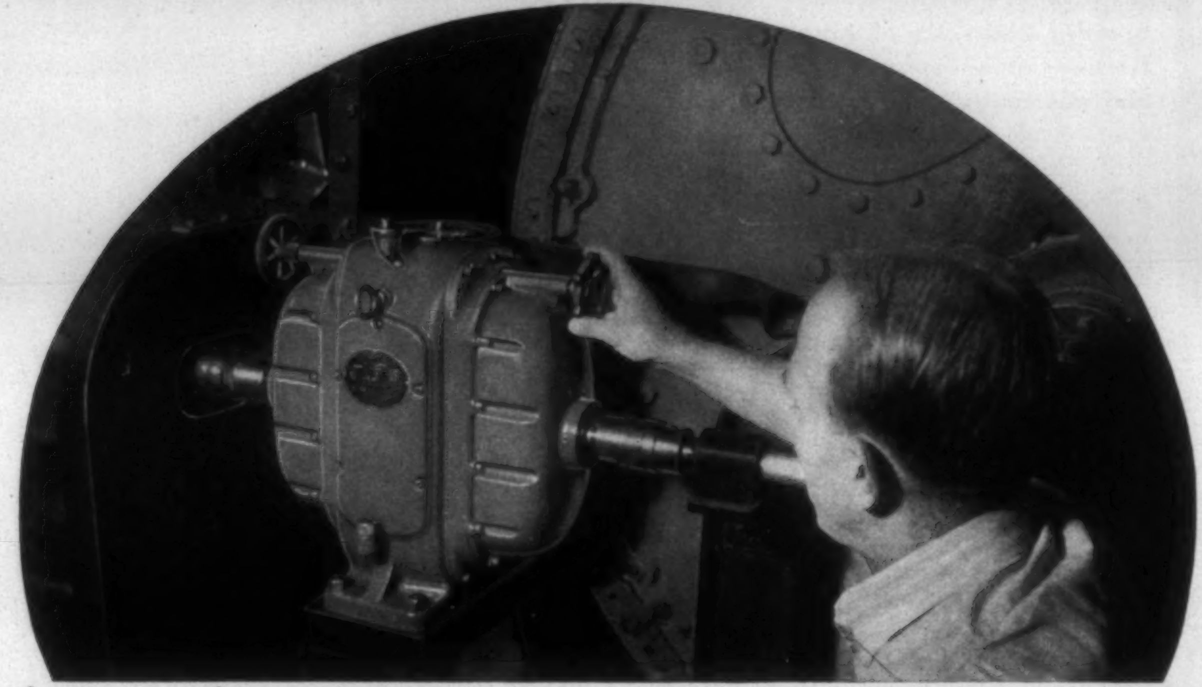
Spooler kinks are eliminated, on Barber-Colman spoolers, by a special automatic device which prevents kink formation during and after the tying process. This improves quality of warps, reduces breakage and loom stops in the weave room, and materially improves cloth quality.

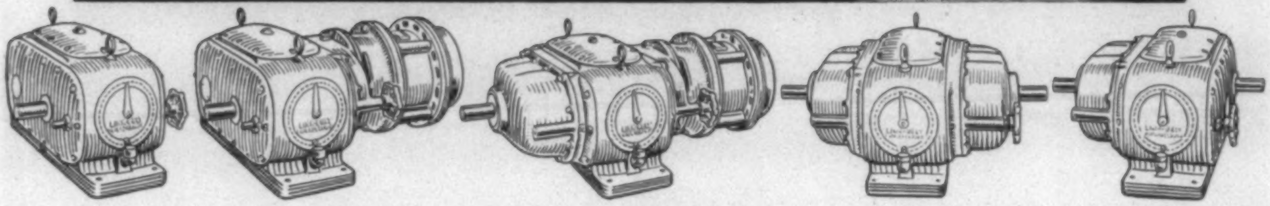
BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

POSITIVE INFINITELY VARIABLE SPEED CONTROL NOW AVAILABLE IN SMALLER HORSE POWERS

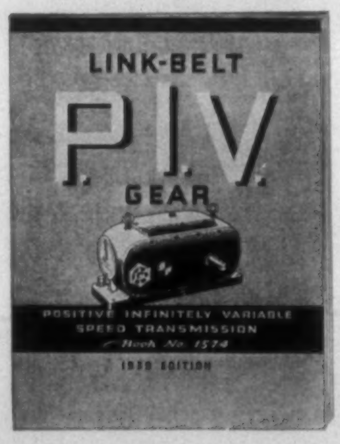




Get Dependable Help on Variable Speed Control from This New Book

● Industry can now make even broader application of P.I.V. Gear variable speed control benefits. Two new small sizes, ½ H.P. for speed ratios of 2 to 1 and 3 to 1, and 1½ H.P. for ratios of 2 to 1, 3 to 1 and 4 to 1, added to the present five sizes, meet a widespread demand that has developed in every industry, due to the many speed control problems which have been solved by this unique speed variator. The range of sizes now extends from ½ to 15 H.P.

An all-metal, compact unit, available for horizontal, or vertical mountings, in seven different models, hand or automatic control, the P.I.V. Gear offers you the opportunity of achieving simple, accurate, positive speed control. With it you can build into your machines, the versatility needed to meet today's varying production requirements.



LINK-BELT

P.I.V.

GEAR

POSITIVE INFINITELY VARIABLE SPEED TRANSMISSION

Book No. 1574

1939 EDITION

Find out about P.I.V. Gears — how industry uses them to improve quality — eliminate waste — promote uniformity — and to cut costs by reducing product spoilage. Send for Book 1574 (1939 Edition). It contains 40 pages of information and engineering data that will be helpful in solving your speed control problems.

Link-Belt Company, Philadelphia, Indianapolis, Chicago, Atlanta, San Francisco, Toronto. Offices in principal cities.

7842

LINK-BELT POSITIVE DRIVES INCLUDE

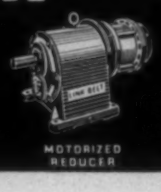
SILENT CHAIN DRIVE

ROLLER CHAIN DRIVE

P.I.V. GEAR SPEED VARIATOR

V.R.D. VARIABLE ROLLER DRIVE

HERRINGBONE GEAR REDUCER



MOTORIZED REDUCER

WORM GEAR REDUCER

A BALANCED CHEMICAL SERVICE

ACIDS

Acetic—Cresylic—Formic—Muriatic—Nitric—Sulphuric—Tannic.

ALKALIS

Caustic Soda—Caustic Potash—Carbonate of Potash—Soda Ash.

HEAVY CHEMICALS

Bichromates—Prussiates—Glauber's Salt—Iron Acetate—Carbon Tetrachloride—Formaldehyde—Sodium Sulphate Anhydrous—Sodium Nitrite—Sodium Sulphide—Silicate of Soda—Alum—Phosphate of Soda, Di and Tri—Tetra Sodium Pyro Phosphate.

Orders sent to our nearest district office or warehouse will assure you prompt delivery of the products listed above.

AMERICAN CYANAMID & CHEMICAL CORPORATION

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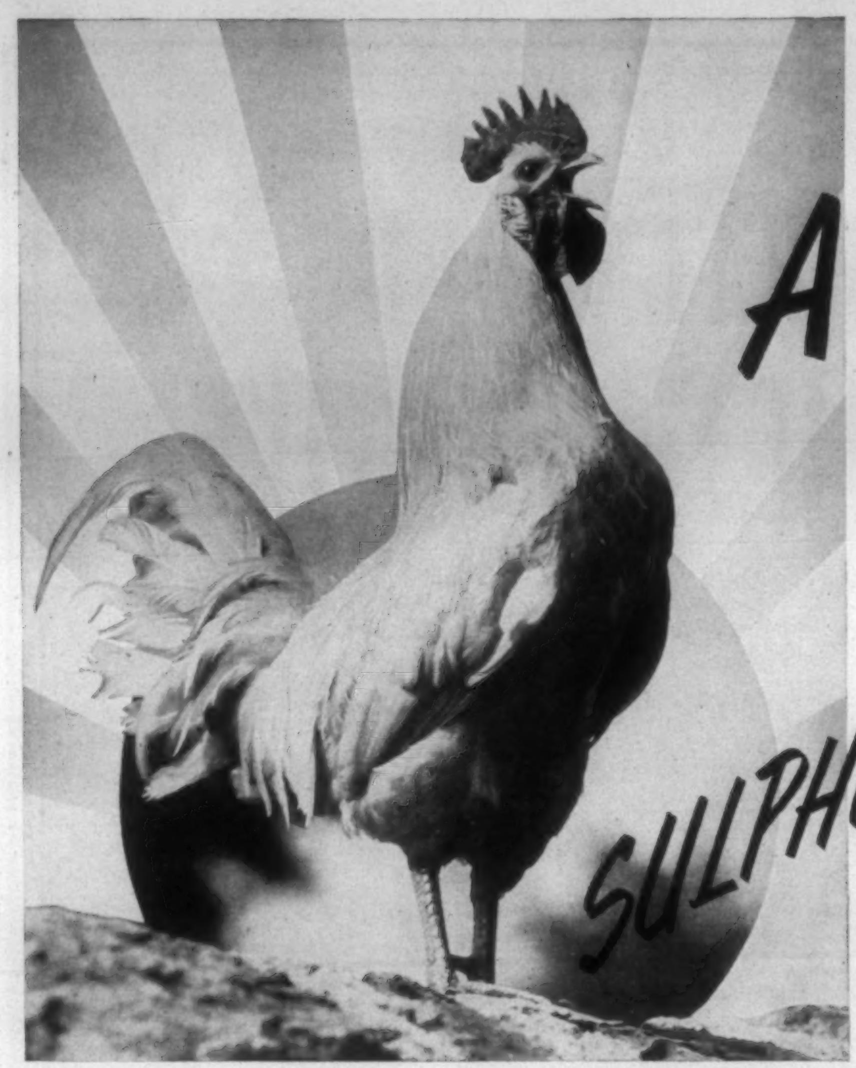
DISTRICT OFFICES: 89 Broad Street, Boston, Mass.; 600 S. Delaware Avenue, Philadelphia, Pa.; 822 W. Morehead Street, Charlotte, N. C.; 20 N. Wacker Drive, Chicago, Ill.



ARE YOU AWAKE TO OUR WIDE VARIETY OF SULPHONATIONS?

Forty years of sulphonating experience enable us to supply not only all standard sulphonated oils and tallows, but also a variety of special products as well.

You may choose from our Sulphonated Olive Oils, which are *all* olive oil products, or from our Oratol series, having an olive oil base, combined with other vegetable oils of similar characteristics.

In our Sulphonated Castor Oil line, despite fashion changes in forty years, Monopole Oil is still considered the leader. It is double sulphonated, highly concentrated, and noted for its solubility in salt solutions, acid liquors, hot, cold or hard water. Among the single sulphonated oils we can supply any concentration adjusted to any pH.

For your Sulphonated Tallow requirements, use our Cream Softener J.B. or Conc. Our special method of sulphonating tallow protects the natural glycerine content in the tallow and thereby assures the maximum softening power. Samples of any product will be sent on request.

SULPHONATIONS MOST GENERALLY USED:

Monopole Oil
Monopole Oil M.D.D.
Monopole Brilliant Oil
Sulphonated Castor Oil
Sulphonated Olive Oil
Sulphonated Teaseed Oil
Sulphonated Red Oil
Sulphonated Oleic Acid
Sulphonated Pine Oil
Sulphonated Mineral Oil
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Sulphonated Cocoanut Oil
Sulphonated Corn Oil
Sulphonated Peanut Oil
Sulphonated Tallow

And combinations with all types of solvents.

WOLF BRAND PRODUCTS

JACQUES WOLF & CO.
Chemicals
PASSAIC, N. J.

WAREHOUSES: Providence, R. I., Philadelphia, Pa., Utica, N. Y., Chicago, Ill., Greenville, S. C., Chattanooga, Tenn.

UTILIZE SPECIALIZED KNOWLEDGE---

When YOUR Life Is Involved This Knowledge May Cost $10,000. When The Life of LEATHER COTS Is Involved It's YOURS FOR THE ASKING

Because innate skill and rich experience have equipped him to cope with ANY emergency, the "big" surgeon can command operating fees as high as $10,000.

Having more than 100 years of background in the manufacture of roller leather, we flatter ourselves that our specialized knowledge of this subject is equivalent to the "big" surgeon's knowledge in his chosen field. Yet our recommendations on how to get maximum life from your leather roll covering are yours merely for the asking.

We make no charge for this service, because we are manufacturers, not professional men, and our sole interest is to make GILLEATHER perform as we know it CAN perform.

This confidence is well founded, as for instance in the case where a mill reduced its roll covering costs 2/3 by using the kind and grade of GILLEATHER that we recommended.

Let GILLEATHER solve YOUR roll covering puzzles. It will pay big dividends.

GILL LEATHER COMPANY
SALEM, MASS.

SHEEP and CALF SKIN
GILLEATHER
for TOP ROLLS

Southern Representatives

Gastonia, N. C.: W. G. Hamner
Greenville, S. C.: W. J. Moore

Greenville, S. C.: Ralph Gossett
Griffin, Ga.: Belton C. Plowden

Modernize
with X Family Looms

Here's
Why

They Run Faster
More Than 20% Faster

They Allow More Yarn on Bobbins
They Take Larger Yarn Beams

The Output is Greater
The Cost per Yard is Less

They Are Accurately Machined
The Upkeep is Less

They Weave Better Fabrics
The Trade Demands Better Fabrics

You Are Looking for Profits
Which Are
Hard to Get with Obsolete Looms

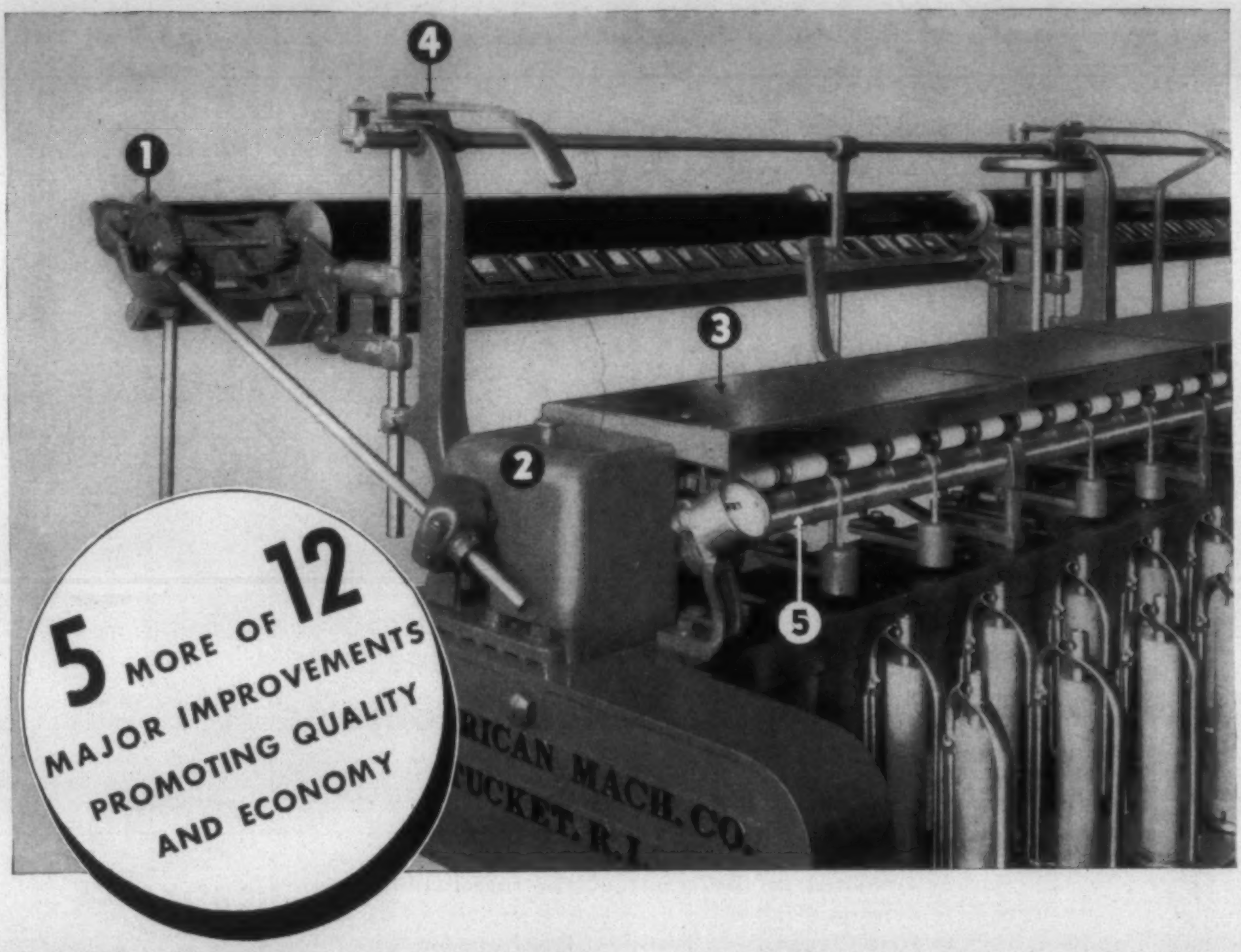
X XK and XL for Cottons
XK and XD for Rayons

DRAPER CORPORATION
Atlanta Georgia Hopedale Massachusetts Spartanburg S C

THE NEW H & B

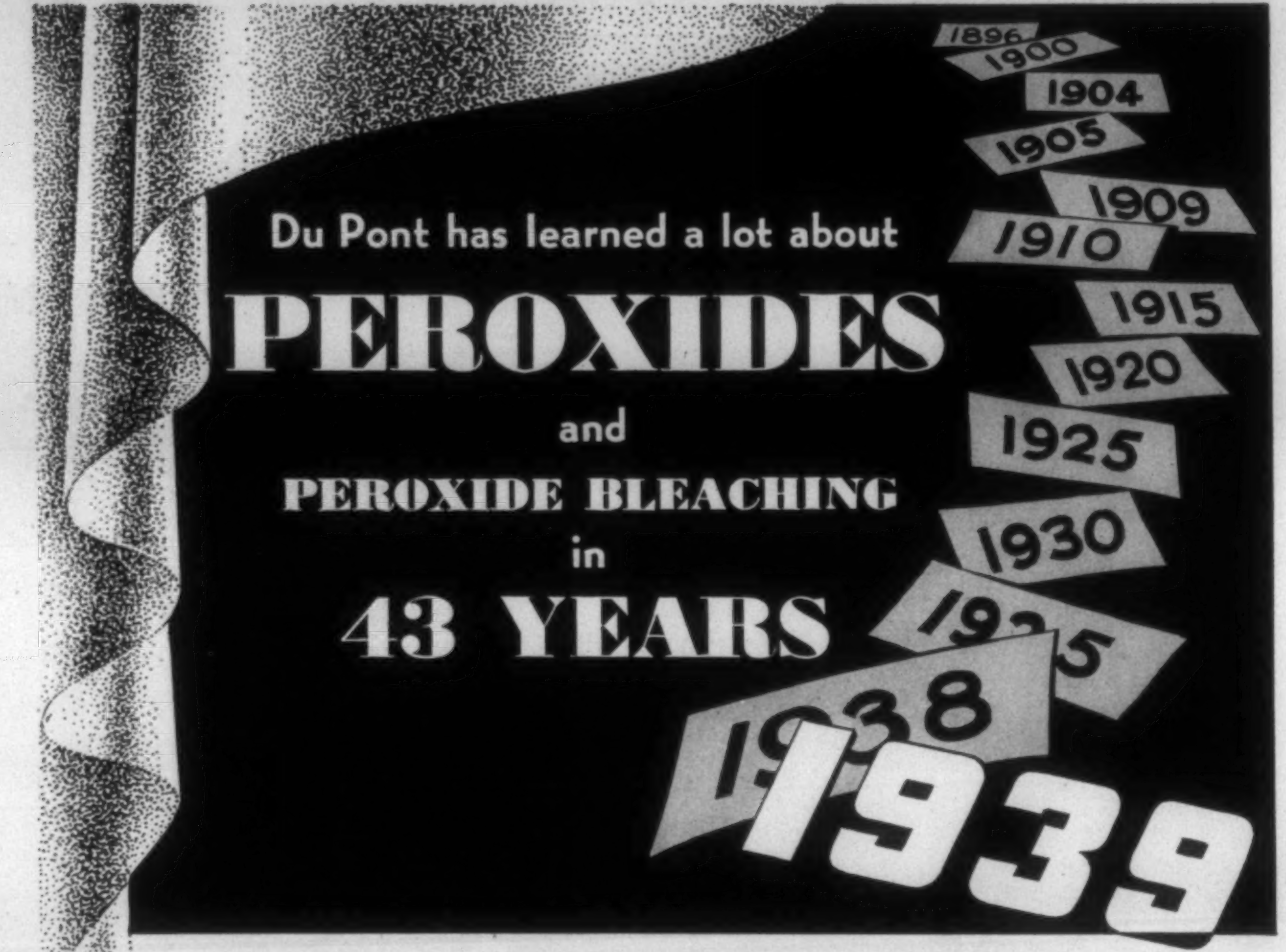
HIGH-DRAFT ROVING FRAME

for ONE or TWO Process Roving, drafting drawing frame sliver up to 35 to produce up to 6 hank roving in one operation. To produce finer roving, this machine's product goes to conventional 3 roll jacks or fly frames.



Illustrated herewith are 5 more major improvements which make the H & B High-Draft Roving Frame an even more profitable investment than before:—**1.** Adjustable bevel gear back lifting roll drive, with cover removed, giving greater stability and smoother operation. **2.** Worm drive adjustable traverse motion, protected by cover, which eliminates dwell. **3.** Rustless metal clearer covers with cylindrical front roll clearer. **4.** New type horse head and belt shipper, giving more rugged construction and more positive operation. **5.** Slotted type underclearer which prevents waste from getting into work and reduces frequency of cleaning. . . Altogether there are 12 major improvements which you should know about. Write without delay for further details regarding this completely redesigned machine.

H & B AMERICAN MACHINE COMPANY
Textile Mill Machinery
PLANT AT PAWTUCKET, RHODE ISLAND
Boston Office: **161 Devonshire Street**
Atlanta Office: **815 Citizens and Southern National Bank Bldg.**
Charlotte Office: **1201-3 Johnston Bldg.**



Du Pont has learned a lot about

PEROXIDES

and

PEROXIDE BLEACHING

in

43 YEARS

This wide experience can be useful to you with your individual problems

Pioneering . . . developing new processes . . . modifying routine processes to meet changing needs . . . keeping pace with current bleaching demands created as the result of the introduction of new fibres and fabrics . . . that's the record of the du Pont Company in Peroxide Bleaching for the past 43 years.

The du Pont pioneering - research in the laboratory and practical applications in the plant - is constantly going on, with benefits to the textile industry.

If you will lay your specific problems before us, we will gladly work with you. Our technical service men talk your language. Call on us.

DU PONT
REG. U. S. PAT. OFF.

PEROXIDES

ALBONE*
Du Pont Hydrogen Peroxide
100 vol. Electrolytic

DFF†SOLOZONE*
(Du Pont Sodium Peroxide, dustless and free flowing)

SODIUM PERBORATE

* Reg. U. S. Pat. Off.
† Trade Mark.

DU PONT
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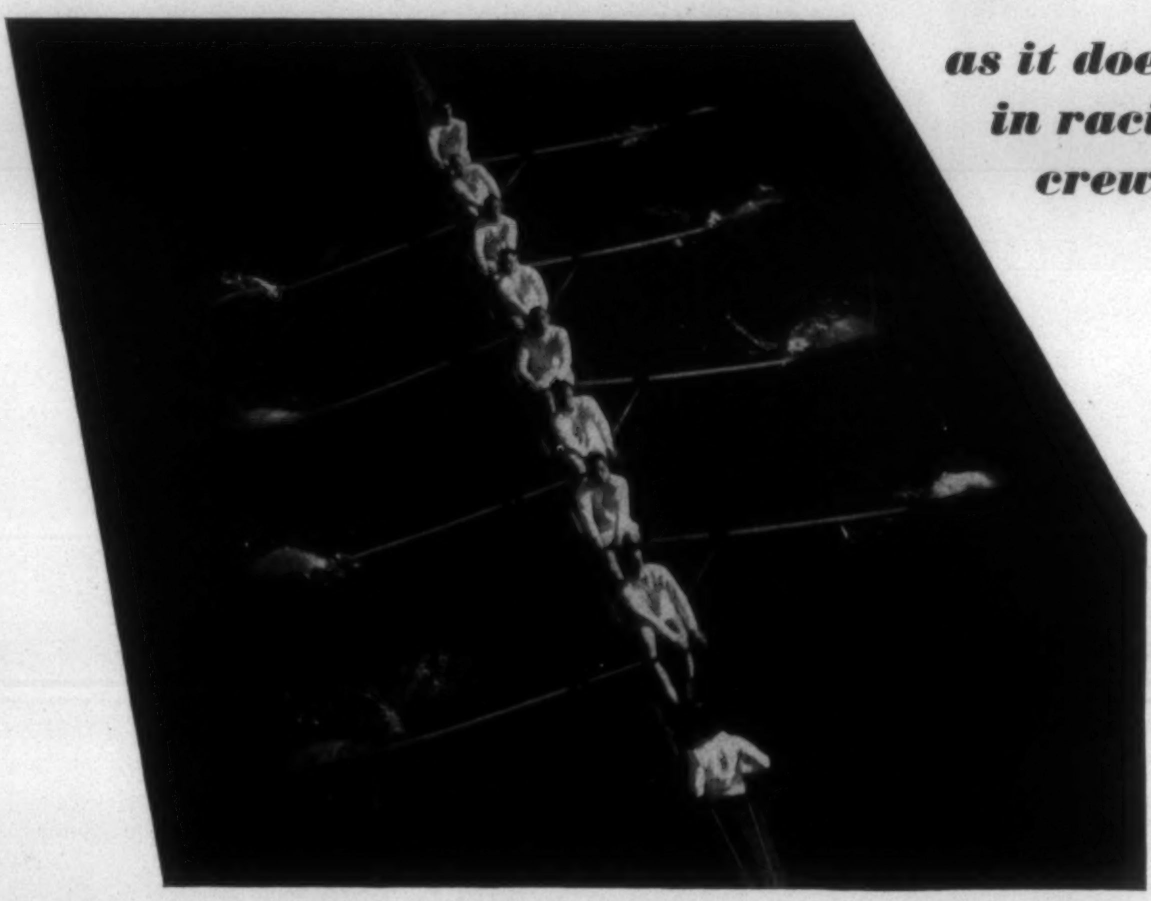
E. I. DU PONT DE NEMOURS & COMPANY (INC.)
The R. & H. Chemicals Department
Wilmington, Delaware
District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco

Precision plays a part in building

TUFFERIZED Card Clothing . . .

PATENT APPLIED FOR

as it does in racing crews



The *new* TUFFERIZED Card Clothing requires precision accuracy, too. New precision machines manned by master craftsmen create a new excellence in TUFFERIZED Card Clothing. Wires are cut clean and sharp to precisely the same length without wire burrs. Then wires are formed with square crowns. Teeth are straight and parallel. Uniform wires are set accurately into the famous patented TUFFER foundation where they fit firmly, flat, and project to exactly the same distance and lie in the same plane. So what! So you can get more accurate and even setting, more uniform carding, more service, more production, and more performance between grindings.

Write for additional information or ask our representative

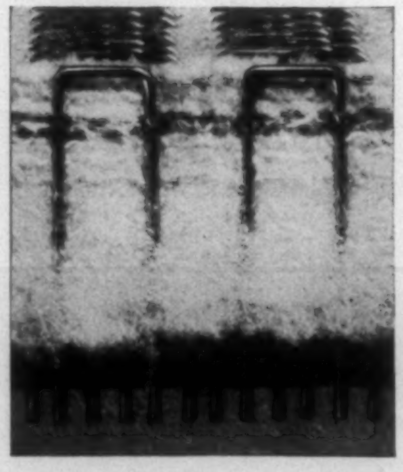
HOWARD BROS. MFG. CO.

HOME OFFICE AND FACTORY: **WORCESTER, MASS.**

Southern Plants: Atlanta, Ga., Gastonia, N. C. **Branch Offices:** Philadelphia, Dallas

Canadian Agents: Colwool Accessories, Ltd., Toronto 2, Canada

Products: Card Clothing for Woolen, Worsted, Cotton, Asbestos, and Silk Cards—Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all plants—Lickerins and Garnett Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant—Midgley Patented Hand Stripping Cards, Howard's Special Hand Stripping Cards and Inserted-Eye and Regular Wire Heddles



Microphotograph shows how Tufferized Card Clothing wires seat square, flat, and firmly into the foundation with wires parallel . . even in length . . spaced uniformly

What Product or S

Spinning-frame motor with large, unobstructed openings, and aerodynamic fans to clear the motor of lint or dust. Tested by more than two years' experience

The G-E loom motor is easy to oil, has exceptionally large oil reservoirs, and the electrical and mechanical characteristics to assure sustained high speed throughout the load range

▶ In one enclosing case, the G-E combination switch includes starter, short-circuit protection, running-overload protection, and disconnecting switch

For direct low-speed drives, G-E gear-motors are designed for high efficiency, and they occupy little space. In a typical example, the entire motor unit, complete with gearing, is only 3 inches longer than a standard motor. Pictured: A napper driven by a G-E gear-motor ▼

THERE is scarcely an important process that does not require electrical operation or is not improved by it. And whether it's a totally enclosed, fan-cooled motor in a dye house, or a double-end-shaft gear-motor for mounting on the ceiling, or a motor with any of numerous standard and special modifications, you can get practically any type of electric equipment from General Electric.

From General Electric, too, you can get service in the emergencies when production may be disrupted by a flood or other catastrophe. Also from General Electric you can get promptly any renewal parts necessary to restore the equipment to original factory-new performance.

Pictured on these pages are a few of the representative equipments available from General Electric.

For
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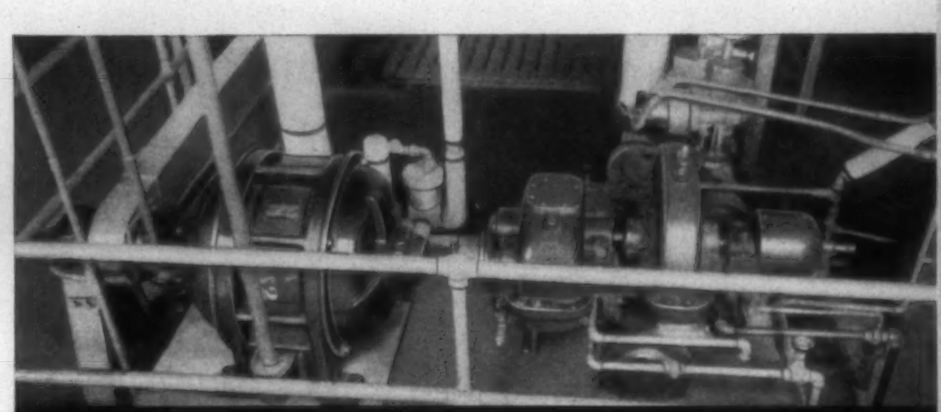
System Do You Need?

For many processes, there have heretofore been no satisfactory mechanical methods and no electrical system. A number of such processes have been improved by electrical operation.

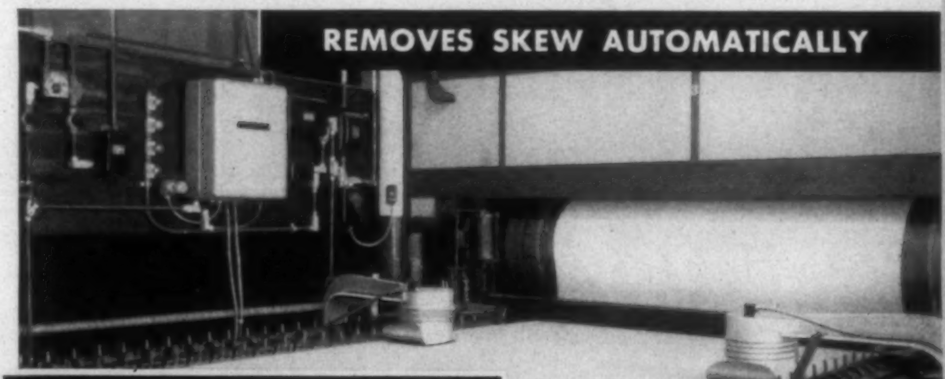
Work with mills and machinery manufacturers by General Electric engineers has brought successful attainment, for example, of weft-straightening, bow control, turbine-electric range drive, and specialized applications, such as an automatic air doffer to stack pillow cases.

Wherever you want electric drive, control, or auxiliary applications, ask for information from the nearest G-E sales-engineering office or write General Electric, Schenectady, N. Y.



NEW TURBINE-ELECTRIC RANGE DRIVE

High-pressure process steam drives a turbine-generator for range-drive motor current—an advanced development for the textile industry. This is one of *four* kinds of range drive furnished by General Electric. The others are *d-c adjustable-voltage, d-c constant voltage,* and *adjustable speed a-c motor drive*



REMOVES SKEW AUTOMATICALLY

For automatic and continuous correction of skew, complete photoelectric weft-straightening control equipment—another development of General Electric for improved processing

DOFFS PILLOW CASES

◀ Stacked up by air with the greatest of ease. Electrically controlled puffs of compressed air, delivered at the right time and place, automatically flick pillow cases off this conveyor and stack them

SEAM-DETECTOR PROTECTS ROLL AND FABRIC

◀ Automatic letup. For fast, accurate easing up on the calender roll when the seam comes through, a G-E seam-detector equipment provides instant and automatic pressure release and pressure reset. This avoids denting the fiber roll and the consequent marring of cloth patterns

GENERAL ELECTRIC

011-543

VITRITEX FINISH

for

SPINNING
RINGS

An Exclusive Production
of the

PAWTUCKET
SPINNING RING
COMPANY
(*A Subsidiary of* SACO-LOWELL SHOPS)

Has these 7 *Advantages:*

1. Adaptable for cotton or rayon.

2. Requires no prolonged starting-up period.

3. Has a surface, highly resistant to tarnish.

4. The brilliant surface is produced without sacrificing the depth of hardened case.

5. The Vitritex Finish is carried to the underside of the flange and corners of the web.

6. The smooth, glasslike surface has a desirable effect on traveler consumption, a factor of importance in any spinning room.

7. Uniform surfaces in all rings produce equality in tension and balloon at every spindle. Therefore, bobbin diameters are identical.

PAWTUCKET SPINNING RING COMPANY, *Central Falls, R. I.*

THE PAINT YOU'VE BEEN WAITING FOR—

A REALLY *PRACTICAL* QUICK DRYING PAINT FOR LARGE INDUSTRIAL AREAS

THESE VIALS TELL THE RICE PROCESS STORY . . .

VIAL A contains refined linseed oil as commonly used in white oil paints. Mixed with white pigments, the oil *seems* to lose its color. BUT *the yellow is still there!* Sooner or later, it will show up on your painted walls and ceilings.

VIAL B shows how the same oil appears after treatment with our secret Rice Process. It is almost pure white in color. *The yellow is removed!* This exclusive process is why we can blend synthetic vehicles with our processed oils and give you a Barreled Sunlight that (1) is whiter to start, that (2) stays white longer, (3) dries quicker, (4) spreads and hides better, (5) flows more easily.

AGAIN the famous secret Rice Process breaks paint tradition . . . brings out a quick drying form of Barreled Sunlight that shatters all standards of conventional white finishes!

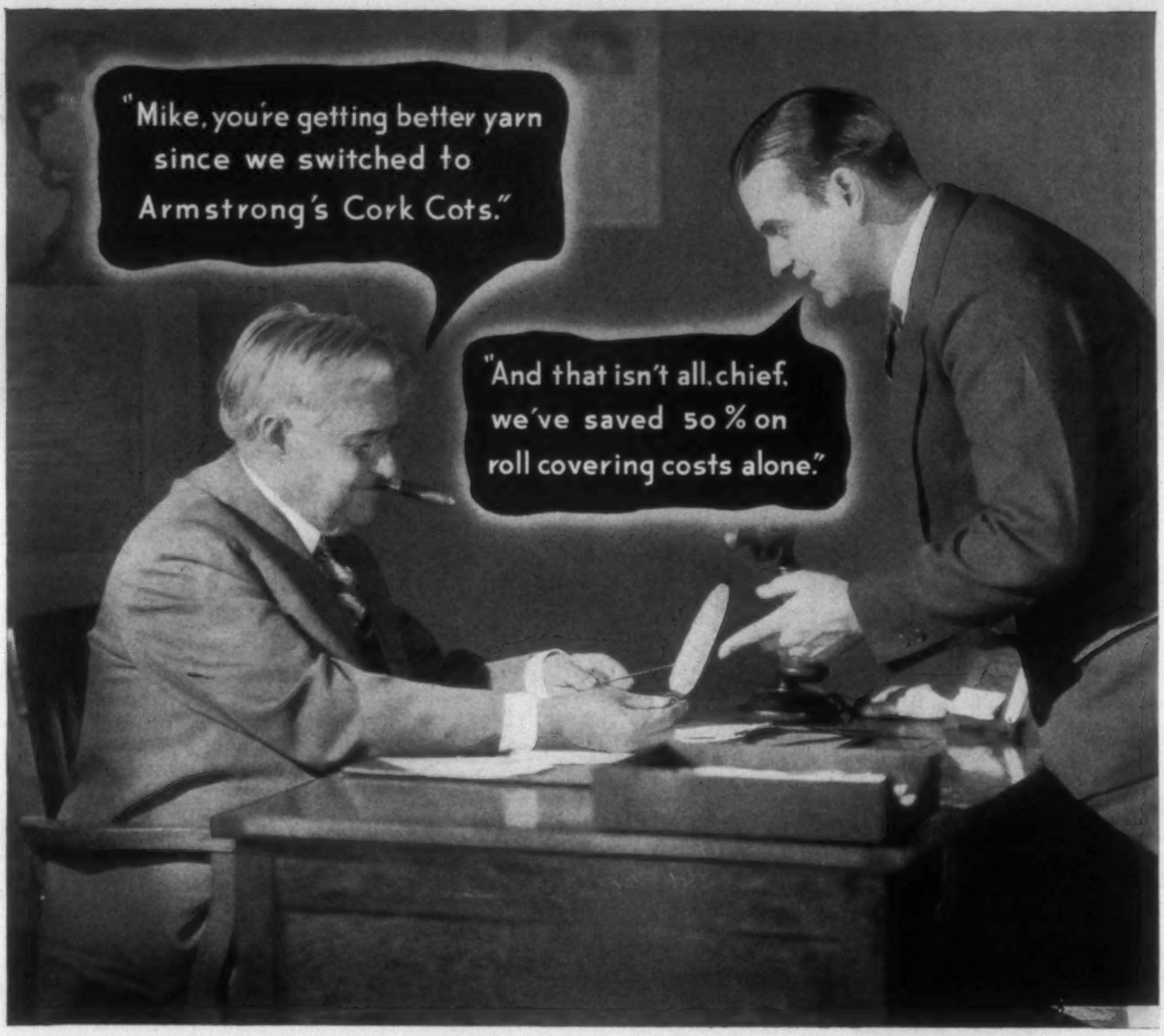
This new Barreled Sunlight is *still whiter*. What's more, it holds its whiteness *even longer*. Its unmatched spreading and hiding powers save time and paint. Painters work faster because it flows much easier. It is the most practical quick drying paint today for large-area work. It offers every element for low-cost, high-quality work.

You get these advantages only in Barreled Sunlight, for no chemist can copy the Rice Process. *It defies chemical analysis*. It has kept Barreled Sunlight the leader in its field for 25 years. It is only by this secret process of treating linseed oil that newer synthetic types of vehicles can be combined to produce such an outstanding finish. For this reason, Barreled Sunlight is now more than ever the one white paint that other laboratories try to equal.

For complete information, write for a free copy of "More Light with Lasting Cleanliness." Address U. S. Gutta Percha Paint Co., 5-K Dudley Street, Providence, R. I.

BARRELED SUNLIGHT

WHEN ORDERING, PLEASE SPECIFY "QUICK DRYING FORM"


"Mike, you're getting better yarn since we switched to Armstrong's Cork Cots."
"And that isn't all, chief, we've saved 50% on roll covering costs alone."

Chief: Mike, I can see that we're turning out a more uniform yarn since we changed the mill over to those Armstrong's Cork Cots. I can see that we get better running work with fewer top roll laps and less end breakage. I've even noticed that these cork cots have practically done away with eyebrows—and that there's less clearer waste. But this 50% saving on roll covering costs—well, there must be a string tied to it somewhere; you've got to show me!

Mike: Chief, that's easy. In the first place, cork doesn't cost us any more than the roll covering we've been using. Then we begin to save money right away with quicker, cheaper assembly. And cork lasts longer than other coverings because of its toughness, plus the fact that we can renew these cots three or four times by rebuffing. When we rebuff, it costs us only about half a cent a roll. Here are the figures in black and white—a clear 50% saving altogether!

LET an Armstrong representative show you how *your* mill can improve yarn quality and cut production costs by a change-over to Armstrong's Seamless Cork Cots, the modern roll covering. He'll give you actual production figures of mills spinning your range of numbers on cork and will be glad to answer any questions you might have. Or write to Armstrong Cork Company, Industrial Division, Textile Products Section, 921 Arch Street, Lancaster, Pennsylvania.

ARMSTRONG'S *Extra Cushion* SEAMLESS CORK COTS

CORK PRODUCTS SINCE 1860

TEXTILE BULLETIN

MEMBER AUDIT BUREAU OF CIRCULATIONS

Vol. 57 November 15, 1939 No. 6

Wars and the Textile Industry*

By Wm. P. Jacobs

Mr. Jacobs, executive vice-president of the Cotton Manufacturers' Association of South Carolina, and one of the best informed textile men in the South, says that the wars the textile industry has most to fear from are the wars of "obsolescence and depreciation," "the war of high costs which build inevitable losses and too frequent liquidation," "the war of foreign imports upon our domestic industries," and "the war of synthetic fibers and competitive fabrics upon cotton."

THE subject assigned to me for this occasion is an unusually difficult one for the reason that I know very little about the present war, and even less about the trends which result from this war and the effect of the war on the textile industry today and in the future.

Under the circumstances, therefore, in discussing this subject, I will have to take advantage of editorial or poetic license or hide behind technical terms.

I do not believe that the present war in Europe has had much influence upon the market for textiles. In the first place they do not seem to be fighting this war with guns, but rather with gas—the kind of gas that we hear over the radio and read in the newspapers; and I do not believe the smart boys in New York who influence the market will become much excited over the effects of the present type of warfare. They are past-masters at anticipating causes and effects, and while I am not a prognosticator, it does look like from a market standpoint, the present European war has already been discounted. Certainly we know that the foreign markets which came to us as a result of the World War of 1918, have long since been lost to Japan and other textile countries, and it does not seem likely that a disturbance in Europe will run very much foreign textile business back to us. A little while back we had quite a spurt in textiles. Our records in the Print Cloth Group indicated sales of over 200,000,000 yards of print cloths in the ten days' spurt, and a part of that spurt was undoubtedly due to the threat of war. But the war anticipated by that spurt was one of destruction and commercial disturbances and nothing like the war which actually followed. I read a few weeks ago an especially interesting statement in the *Daily News Record* by some prominent broker in New York to the effect that the sales of that time included very little of speculation; that it was a case of our customers, in the face of war fears, replenishing their stocks which had been abnormally low for several months prior to that time. This statement, while undoubtedly based upon fact, struck me forcibly because immediately preceding the statement, the Print Cloth industry had, upon advice from their customers, been vigorously endeavoring to curtail production so as to reduce manufacturers' stocks. I have clipped this particular item out and I am holding it in my files for the consideration of those who may wish to study trends the next time we are led to believe that we are producing too many goods.

In the light of the experience of past years, it is reasonable to expect a small sales spurt in November, or early December, but even when the spurt comes it is unlikely that the existence of a war will encourage our customers to break their precedent of many years' standing which calls for the reduction of their inventories in preparation for the turn of the year. We may have another spurt before Christmas and a larger spurt after the turn of the year, but it is impossible to avoid the realization that between every peak there is a valley; between every spurt there is a lull, and the valleys are wide this day and time and the lulls so hypnotizing that they put some of our plants permanently to sleep; and we cannot avoid the additional conclusion that in spite of the spurts the basic price for textiles remains deplorably low—too low for safety and comfort.

In discussing the present war, therefore, we cannot truthfully anticipate any great or wholesome stimulation of sales or basic prices for textiles. Nor can we conclude that any prosperity is wholesome which is based upon the hysterical speculation, due to the influence of a destructive war. The pendulum has a way of swinging and the rebound is not always too pleasant.

Other Wars Than European

And now, I will hide behind technicalities, and discuss the effect of greater wars than the present European war. In fact, I will consider the effect of several wars upon the textile industry—wars which are growing in intensity and

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*Presented at Annual Meeting of the North Carolina Cotton Manufacturers' Association, Pinehurst, N. C., November 3rd.

DAMAGED PAGE(S)

in danger—wars which foretell the end in too many instances. The war of "obsolescence and depreciation." Those twin forces which have never lost a battle. "The war of high costs which build inevitable losses and too frequent liquidation"—"the war of foreign imports upon our domestic industries" and lastly, for manufacturers of cotton goods, "the war of synthetic fibers and competitive fabrics upon cotton." These are the wars which hurt us most. These are the wars which leave indelible scars. These are wars which above all other influences, build our industrial cemeteries.

The study of the effect of these four wars upon textiles involves a study of trends, and an examination of our statistical position today as compared with the position eight years ago presents some interesting thoughts. For our convenience, the comparative figures which I now present cover a period of seven years. This period, incidentally, is concurrent with a new trend in social and economic thought in America, and it is well that this period is selected. However, I assure you that this comparison has no political significance whatever, and is based upon the first fact which I will present you—a prediction made to me in 1931 by one of America's foremost engineers covering these seven years, a prediction which has already come true. Using the years of his prediction as a basis, let us study our statistical position accordingly. He predicted that the active spindles in the cotton textile industry in the United States which stood in 1931 at 28,979,646 spindles would be reduced by liquidation at least 25% during the 15 years which were to follow. I recently checked his prediction at the end of eight years and found that in August, 1939, the active spindles in America had been reduced to 22,012,186, a decrease of 24%, in just about half the time which he allotted. I was interested in reminding him of this prediction and in getting his views as to the future liquidation within the United States. He stated that he feared that the industry could not reach an even keel in this country, in view of present trends, until spindles were liquidated to approximately eighteen million active, or a further decrease of more than 16% from the present status within the second half of his fifteen-year prediction.

Spindles Being Reduced

As the basis of our study, it would be interesting to note the trend of spindles during the past eight years. In the first place, we should note that in 1932 the spindles in place in the North amounted to 11,374,000 which had decreased by 1938 to 6,773,000. The spindles in place in the South, on the other hand, stood at 19,138,000 in 1932, and in 1938 stood at 18,798,244. The total spindles in place in the United States stood in 1932 at 31,709,000, and had reduced in 1938 to 26,372,000 as compared with active spindles in August, 1939, of 22,012,186. During that same period of time we find that the spindles in place in Great Britain have reduced from 51,891,000 in 1932 to 36,679,000 in 1938. The spindles in continental Europe in 1932 were 49,526,000 and in 1938, 51,104,000. Undoubtedly, those two large enemies, obsolescence and depreciation, have had an affect upon the liquidation of British spindles, and it is probably significant that, during the same period the mills of the United States have not taken advantage of the liquidation in Great Britain, but instead have lost heavily. It is also significant that in 1932, the spindles in place in Japan stood at 7,798,000, and in 1938 they had increased instead of decreased to a total of 12,550,000. It is also significant that this growth in spindles in Japan has been a steady one, showing an increase each succeeding year without a single recession in spite of the fact that, during the later portion of this period, Japan was experimenting with an undeclared war. China had likewise increased from 4,285,000 spindles in 1932 to 5,071,000 spindles in 1937, but China showed a decrease to 4,300,000 spindles in 1938, indicating that it is probably smart mechanized strategy to carefully select the site of a war.

Now, if my engineer friend is correct, and most of the existing trends indicate the soundness of his prediction, where will these two enemies, obsolescence and depreciation, attack us next? Will it be an attack upon the advance guard, on the flanks, or in the rear? The advance guard in the textile industry has ever been found in the field of coarser goods which require a minimum of skill. For instance, New England lost this coarse goods business to the South many years ago, while retaining a semblance of its fine goods field. Meanwhile, the South is in process of losing its coarse goods business, and mills which formerly shipped excessively to China, Japan, India, Ethiopia, the Philippines, South America, Cuba and other large users of coarse goods, have lost that business to foreign competitors, and are now engaged in a life and death struggle with domestic mills for a portion of the patronage for products made from finer yarns. Japan seemed to be attacking the advance guard and is rapidly gaining control of Oriental and South American trade in coarse goods. Now they are attacking on the flanks by picking off much of our domestic print cloth business.

77-B Merely "Shot in the Arm"

Whatever the trend may be in the future, and whoever may be the competitors, it is safe to conclude that our mills are getting older, machinery is wearing out, and in some instances, surpluses depleted. Replacement with modern, cost-reducing machinery is not always possible. This inevitable process of age, and wear and tear, no doubt induced Congress to apply a "shot in the arm" through the adoption of clause 77-B in the National Bankruptcy Act. Through this clause death was averted. In some instances, aided by Federal borrowing, new life was introduced. In other instances, the stimulant was only temporary and is already wearing off. The end in too many cases was not avoided, but merely delayed.

It would not be fair for me to make this statement without a reference to the fact that much of our difficulty has been due to a temporary lack of confidence in the future of the industry on the part of capital. I had the privilege recently, in an address in Charlotte, of urging the directors of our Federal Reserve Banks to consider the textile industry as basic; and with renewed confidence, to supply the capital which is needed to replace obsolete equipment with modernized machinery, not for

(*Continued on Page* 52)

Weaving and Slashing Problems

South Carolina Mill Group discusses problems of twist effect on shrinkage of fabrics in Sanforizing, other weave room and slashing problems.

THE Fall Meeting of the South Carolina Weavers' Division of the Southern Textile Association was held at Clemson College, S. C., on Saturday morning, November 11, 1939, beginning at 10:30 o'clock. Mr. G. G. Simmons, superintendent of the Drayton Mills, Spartanburg, S. C., the chairman of the Division, presided. The invocation was said by Mr. V. D. Snyder, overseer of weaving, Victor Mill, Victor-Monaghan Co., Greer, S. C.

A stenographic report of the meeting follows:

Chairman Simmons: Gentlemen, I am glad to see so large a crowd present this morning.

As the first feature on the program Dean H. H. Willis, of the Clemson College Textile School, is going to tell us something about his school.

H. H. Willis, Dean, Clemson College Textile School, Clemson: Your program is crowded, so I shall take only two or three minutes. It is a pleasure to have you in Clemson again. Dr. Sikes would have been with us but that he had to be in Columbia yesterday and was not sure he would get back. He asked me to extend you his greetings and to tell you that you are welcome to meet at Clemson.

We have in Clemson College this year 2,027 students enrolled in the six different schools, Agriculture, Chemistry, Engineering, Textiles, etc. In our Textile School we are training the future leaders in the textile industry. This Fall a man brought his son to Clemson to enter him in the Textile School, and that boy represented the fourth generation of his family who had been trained there.

Just recently our new Textile Building, which is the largest in the country, has been completed. I hope you will have time to visit that and to get at least a bird's-eye view of our buildings and campus.

We are very glad to have you here and hope you will come again.

Chairman Simmons: Thank you, Mr. Willis.

Gentlemen, we have with us the president of the Southern Textile Association, Mr. P. B. Parks, Jr., superintendent of the No. 5 Mill of the Erwin Cotton Mills Company, of Erwin, N. C. I am going to ask him to say a word to us now. (Applause.)

Mr. Brine, who will take over his new duties about

P. B. Parks, Jr., President, Southern Textile Association: Gentlemen, it is an inspiring experience to be at Clemson and a real pleasure to me to be here this morning, but mostly it is a pleasure to see you men here. Sometimes I wonder, when we have our meetings at the same place and on the same date as a football game, whether it is enthusiasm for the game or enthusiasm for the meeting that brings the men. I do not know which it is in this instance, but it is fine to see so many here.

As for the Southern Textile Association, having been to a number of these meetings of the various sections, I have become more and more impressed with the work of the Southern Textile Association; and I want to tell you that the work you are going to do this morning and that you have been doing is likewise being done by other sections all through the South, and they are getting the same sort of help from their meetings that you get from yours. Men come to those meetings who are up against the same problems that you have or have had or will have. When you exchange ideas with another man, both of you are helped. So I recommend heartily to you attendance at [illegible] future meetings.

Unless you are an egot [illegible] indebted to the Sou [illegible] meetings. You ca [illegible] member of the So [illegible] we are delighted [illegible] time you can, w [illegible] tion. But you m [illegible] Association whe [illegible] want you to real [illegible] you have access [illegible] but to the minutes [illegible] in book form and iss [illegible] for your membership [illegible] can heartily recommen [illegible] you.

Chairman Simmons: [illegible] months ago, when we beg [illegible] eting, Mr. Clark, the Editor of the TEXTILE BULLETIN, whom you all know, graciously consented to get a speaker for us who knows something about finishing cloth and who would talk to us along that line. The next feature of our program is a talk on that subject, and I am going to ask Mr. Clark to introduce our speaker.

David Clark, Editor, TEXTILE BULLETIN, Charlotte, N. C.: Gentlemen, the speaker today has the most varied technical experience of any man I know. He was a classmate of mine in the North Carolina State College, in mechanical engineering. Later he was connected with an engineering firm which designed many of the textile mills in the South. Still later he was on the road for the Draper Company for a good many years. Then he went to New York and was designer for two or three selling agencies. Two or three years ago, the Peabody Company, needing a man in their Sanforizing department, secured his services.

(*Continued on Page 43*)

North Carolina Cotton Manufacturers Hold Successful Meeting

THE Thirty-third Annual Convention of the North Carolina Cotton Manufacturers' Association, held at Pinehurst, N. C., on November 2nd and 3rd, was one of the most pleasant and successful meetings ever held by this group. With a large crowd in attendance, the first day was devoted largely to sports and social activity. The second day was featured by the election of officers, reports of committees, the annual address of President J. Harvey White, and the address of Wm. P. Jacobs, executive vice-president of the Cotton Manufacturers' Association of South Carolina. (*This address will be found on page 17.*)

New Officers and Directors

[illegible] president of Textiles, Inc., Gastonia, [illegible] ssociation. Luther Hodges, [illegible] Co., was elected first vice-president, but it has later been announced by Hunter Marshall, re-elected secretary, that Mr. Hodges would not be able to accept the appointment, due to other urgent duties. W. H. Entwistle, president of the Entwistle Mfg. Co., Rockingham, was elected second vice-president.

HUNTER MARSHALL
Secretary-Treasurer

New directors elected for a three-year period are as follows: J. A. Moore, Edenton; Herman Cone, Greensboro; Harold Mercer, Gastonia; Carl Bishopric, Spray; A. A. Shuford, Hickory, and John W. Clark, Franklinville.

President's Address

While the cotton textile industry is on one of its periodic sprees at present and all is well, all may rest assured "that a 'sobering up' time will come again, perhaps next spring," J. Harvey White, president of the North Carolina Cotton Manufacturers' Association, warned in his address.

He expressed hope that the marginal mills that are being revived as a result of the upturn in conditions would be able to accumulate a surplus, but expressed great dubiousness of the possibility of success.

This was especially true in the light of trade treaties, he declared, which by "most favored nation" clauses enable Japan to still further undersell in this market. He also warned mill men to keep their eyes open for Japanese activity, even during present difficulties in China.

"As a result of present conditions," Mr. White declared, "a number of marginal mills which had about given up the ghost are showing new life and starting up. I hope conditions will enable them to get out of debt and accumulate a surplus to meet future needs. However, an old mill with obsolete machinery paying the new wage scale has very small chance of surviving; in fact, its situation is hopeless.

"This situation is further accentuated by the trade treaties which are made with different countries. Just at present the Cotton-Textile Institute is conferring with Secretary Hull relative to a proposed treaty with Belgium which appears to lower the duty on jacquard weaves, tapestries, and coarse cotton goods generally. Due to the 'most favored nation clause' in other treaties, the result would be that Japan would be able to still further undersell our domestic manufacturers in our own markets. Those who make bleached goods, handkerchiefs, etc., know what this means.

"Should this country be drawn into war," he said, "our present taxes will be vastly increased. There are indications that if business continues at present activity, and we keep out of war, the budget may be balanced and no increase of taxes be required.

"The membership committee has been quite active," Mr. White told the convention, "and will report ten new mills with a spindleage of 258,148 spindles added to our membership."

Safety Contest Best Yet

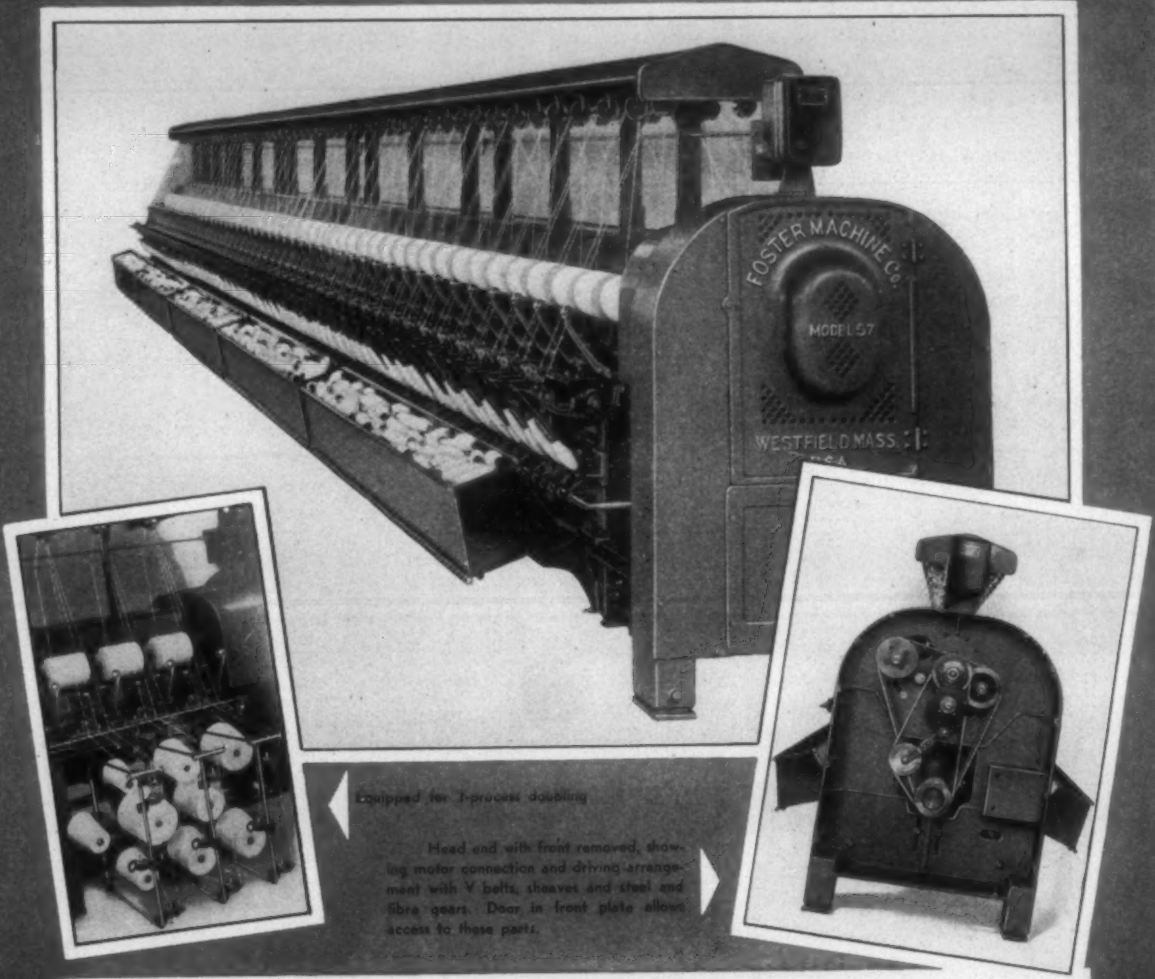
Marion W. Hess, of Greensboro, reporting on the fourth Statewide Textile Safety Contest, stated that this year's contest "was by far the most successful ever conducted in the textile plants of North Carolina." An average of 86,920 employees in 228 plants during the contest worked 107,221,912 man-hours with an average accident frequency of only 10.97 lost-time accidents per million man-hours. The average number of employees during this contest increased 14,017 and the man-hours worked increased 28,100,898 over the third contest.

The trophy winner in Group 1 is the Jewel Cotton Mills, Inc., Thomasville, which operated 244,680 man-hours without a lost-time accident.

The winner in Group 2 is the Southside Plant, Arista

(*Continued on Page 48*)

A NEW TUBE OR CHEESE DOUBLER WITH 4 MAJOR IMPROVEMENTS



Equipped for 3-process doubling

Head end with front removed, showing motor connection and driving arrangement with V belts, sheaves and steel and fibre gears. Door in front plate allows access to these parts.

1. HIGHER WINDING SPEED. Ball bearing shafts and V belt drive. Winding speed limited only by spindle stop action to prevent "run ins."
2. BETTER TENSIONING. Anti-vibration tension devices equalize tension on the two or more ends winding on each spindle. Promote a round yarn with freedom from rough places and "corkscrews."
3. END STOP MOTION. Quick acting drop wire and brake, effective at the highest speed, provide stoppage with yarn length sufficient for single end piecing.
4. SLUB CATCHES, blade type. Adjustable for different sizes of yarn.

Machine has 6-inch yarn traverse and may be equipped to draw from bobbins or cones. Yarn as fine as 150/1 wound at top speed.

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FOSTER DOUBLER MODEL 57

Rayon Staple Fiber Processing

Report Of Discussion At Meeting Of Northern N. C.-Virginia Division of Southern Textile Association

The first part of this discussion was published in the November 1st issue, and included the methods of blending cut staple, the amount of moisture to use during blending, blending of cut staple and cotton, percentage of waste when blending cotton and cut staple, the proper setting of the Kirschner beater in the picker, etc.

The report of the discussion follows, with T. C. Pegram, superintendent of the Erwin Cotton Mills Co., Cooleemee, N. C., presiding:

Denier for Various Blends

Mr. Pegram: Let's take up Question No. 2. *"What denier is best suited for various blends? With wool? With cotton or other fibers?"* Mr. Hope, have you had any experience with that?

Mr. Hope: Yes, sir, we have run a little over there. We have tried a little bit of 1.50 with 1.50, but it did not work out. For acetate and viscose we run 1.50 viscose and 3.00 denier acetate.

Mr. Pegram: Has anyone else had any experience with it at all? It looks to me as if we have already run up against a snag. Nobody has had any experience mixing blends with rayon, yet we are all trying to get information on it. Is there any question anyone would like to ask?

I am going to ask Mr. Smith, of the Tennessee Eastman Corp., if he can give us any information about that.

Harry W. Smith, Tennessee Eastman Corp., Teca Division, Kingsport, Tenn.: It depends upon the size of the yarns you want to make. Length of staple does not enter into it a great deal, except that in acetate-viscose blends use 1½" staple. You want to keep up the number of fibers as high as possible in order to get good breaking strength. 3.00 and 5.00 acetate is used, mostly 3.00, blended with 3.00 denier viscose. The object of the 1.50 denier viscose is to keep the strength up. Of course, you can mix in some coarser denier viscose. That does not enter into the strength. When you use those coarse deniers you can use only a very small percentage.

Mr. Pegram: If you were wanting to make a piece of cotton goods have a woolly feel, made probably of 11¼'s warp and 12's filling, what deniers would you suggest using?

Mr. Smith: Probably 5.00.

Mr. Pegram: The finer your yarn, the finer denier you have to use?

Mr. Smith: Yes, sir. If you were spinning 20's or above you could not use over 3.00 denier, either acetate or viscose. It should be too coarse and stick out too much.

Mr. Pegram: What is the coarsest denier that you think you could spin with cotton successfully?

Mr. Smith: On what number of yarn?

Mr. Pegram: Well, say 11's or 21's, either one.

Mr. Smith: I would not go over 12.00. What staple cotton?

Mr. Pegram: 15/16" or 1".

Mr. Smith: I would not go over 12.00. 8.00 would be better.

Mr. Holt: As you go to a higher percentage you would have to go to a finer denier?

Mr. Smith: That is right.

Mr. Holt: If you were matching viscose and acetate, say you were going to accept 3.00 denier (that is, normally) acetate, then you would normally accept 1.50 viscose? Is that right?

Mr. Smith: Yes, sir.

Mr. Holt: About 1.50 viscose is supposed to be about the size of the cotton fiber?

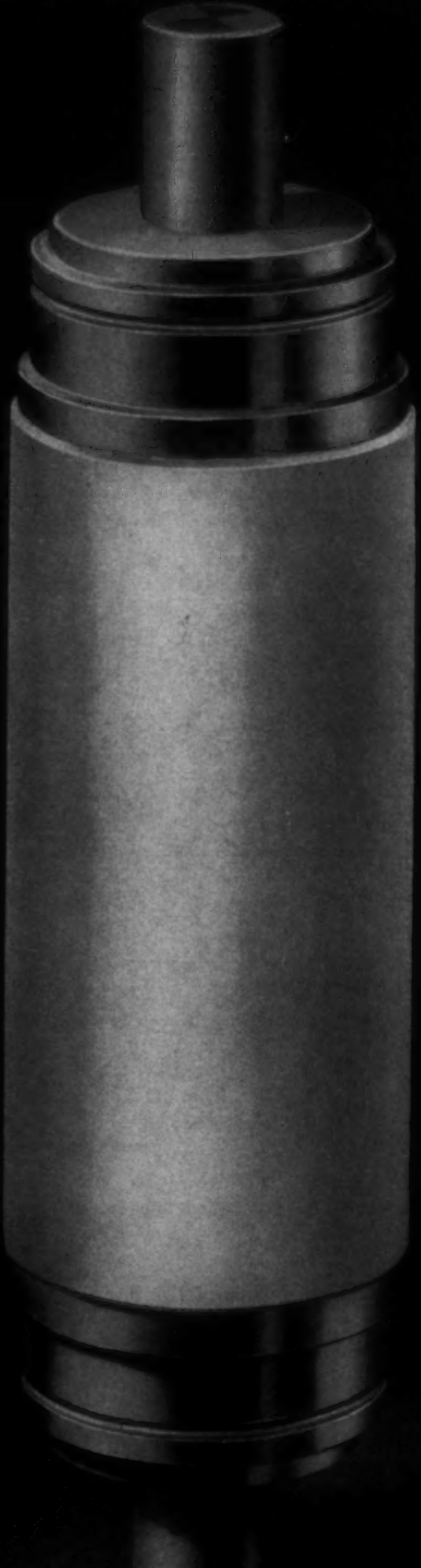
Mr. Smith: Yes, sir—Pima. 3.00 denier is about the size of Carolina cotton.

Mr. Cobb: Would it be interesting, or not, to demonstrate how many fibers there would be in a certain size of yarn? If you are making 20's yarn, using 3.00 denier filament, normally speaking you would have 88 fibers in the yarn.

Mr. Pegram: That is an interesting point. Will you stand up and tell us about that?

Mr. Cobb: I can demonstrate on the board. There is a lot of complaint now that the New York people want too much. The 20's cotton count is 264 denier in the rayon system. That would be 88 fibers. If 20's single cotton count is made with 3.00 denier it would be 88 fibers in cross section. If you should use 5.00 denier it would not run, because it would not hold together. It would have 52 fibers in it. The breaking strength would be less than half. With 1.50 denier there would be 120 fibers. The 52 fibers will not run with 1½" staple. It just will not hold together. Most 20's yarn is 88 fibers in the yarn itself, and you get good breaking strength. You can start blending; you can put a little bit of 5.00 denier in there, but it will not blend. That is with 1½" staple;

(*Continued on Page 59*)



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More Mills Obtain Ruling Against Minimum Payment

Charlotte, N. C.—To the group of textile mills obtaining the original injunction against enforcement of the minimum wage requirements of the Federal Wage and Hour Commission have been added several other companies, according to information received by W. M. McLaurine, secretary and treasurer of the American Cotton Manufacturers' Association.

So far, no North Carolina mills have taken action against the enforcement of the 32½c an hour minimum wage ordered by Elmer Andrews, former commissioner. The new list includes the Aponaug Mfg. Co., and the J. W. Sanders Cotton Mills, of Jackson, Miss., the Lane Cotton Mills, of New Orleans, La., the Acworth Mills, of Acworth, Ga., Berryton Mills, of Rome, Ga., Laurel Mills, of Laurel, Miss., Alden Mills, of Meridian, Miss., Selma Mfg. Co., of Selma, Ala., Alabama Mills, of Birmingham, Ala., Jefferson Mills, of Jefferson, Ga., Micolas Cotton Mills, of Opp, Ala., Magnolia Mills, of Magnolia, Ark., and Monticello Mills, of Monticello, Ark.

When the hearing on the proposed wage minimum was held in Atlanta, Ga., before Mr. Andrews, the representatives of the smaller mills made a determined fight against the 32½c minimum, declaring that such a wage would force them out of business. In spite of this, however, the wage minimum was set at 32½c an hour. The original injunction was granted by the Fifth United States Circuit Court of Appeals upon the plea of representatives of 300 small manufacturing concerns that the wage discriminated against them and that the act was unconstitutional. It is a temporary injunction and the case is to be heard in December.

Confusion As To Who Will Be Wage and Hour Administrator

Washington, D. C.—The resignation of Elmer ~~F.~~ Andrews as administrator of the Wage and Hour Division, Department of Labor, has resulted in a legal tangle which seems to confuse Administration attorneys and those appearing for trade and industry alike. The knotty problem comes about by the appointment of Lt. Col. Philip Fleming to replace Mr. Andrews.

A study of existing statutes seems to reveal conflicting angles which might make it necessary for President Roosevelt to make a recess appointment to the administrator's job this month. Colonel Fleming, as has been noted, was detailed by the War Department to co-operate with interested departments in reorganizing the Wage and Hour Division which administers the Fair Labor Standards Act, and, incidentally, to bring it more into line with the provisions of the Walsh-Healey Public Contracts Act.

As the matter now stands, there are some who believe that because of the failure of the Chief Executive to send the name of Colonel Fleming to the senate for confirmation as Wage and Hour Administrator before Congress adjourned, the Wage and Hour Division will be without a legal head after November 16th unless a recess appointment is made. There is also a mixup on Colonel Fleming's appointment, some holding to the belief that because of his status as an army officer it will be necessary that legislation be passed by the House as well as the Senate before he can be confirmed Wage and Hour Administrator.

On the other hand, there is a group of legal experts who believe that Assistant Administrator Harold Jacobs, who was named acting deputy administrator by Secretary of Labor Perkins, can legally act as administrator until February 16th.

According to those who are making a full study of the vacancy created by the resignation of Mr. Andrews, there is a statute which provides that vacancies created by the resignation of an official whose Presidential appointment must be confirmed by the Senate cannot be filled by an acting appointee for more than 30 days. The Attorney General, however, has uncovered a statute which permits temporary assignment of Federal officials to a post as important as chief of a division within the Agriculture Department for as long as 120 days.

Undoubtedly administration officials will get together on this important matter and arrive at conclusions that will stand court tests should the validity of wage and hour orders now being issued be taken to court by affected trade and industry. It is understood that legal representatives of some of the textile and apparel industries are watching the matter closely with a view of taking the whole subject to the courts if future events justify such action.

Higher Cotton Prices Predicted By W. M. Garrard

Greenwood, Miss.—W. M. Garrard, general manager of the Staple Cotton Co-operative Association, predicts a stronger and higher futures market in the late winter and during the spring months.

"It is our opinion," he says in his analysis, "that American mills will consume between 8 and 8½ million bales this season. It is further our opinion that exports will be not less than 4 million bales and they may be considerably more. If we assume that the offtake this year will be 12½ million bales, which we think is a reasonable assumption, then there will be a deficiency in supply of approximately 750,000 bales, based on the last Government estimate of 11¾ million running bales for this season.

"As the available supply in growers' and merchants' hands had been practically exhausted before the current crop began to move, the only source to which the trade can turn for the 750,000 bales that will be needed, in addition to the current crop, is the loan stock of Government cotton. To lift this cotton from the loan will require a much higher future market.

"This fundamental fact leads us to anticipate a stronger and higher future market in the late winter and during the spring months."

Industrial Rayon Net in Nine Months $569,956

Industrial Rayon Corp. and subsidiaries report, for the nine months ended September 30, 1939, subject to audit and year ended adjustments, a net profit of $569,956, compared with $180,686 for the same 1938 period.

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IGEPONS, the synthetic scouring, wetting, penetrating and emulsifying agents, shorten production time, cut costs and assure the highest quality in finished fabrics.

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1. Extremely stable to hard water, acids, alkalis and salts.
2. Prevents the formation of lime soap.
3. Valuable assistant in the dyeing and finishing of all fibers.
4. Better whites and brighter colors in washing after printing.
5. Cleaner goods and more level shades in dyeing of hosiery.
6. Superior leveling, dispersing and penetrating agent.

IGEPON AP

1. Exceptionally effective in the scouring of woolens, both yarn and piece goods.
2. Stable in hard water of any degree of hardness.
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Effect of Yarn Twist and Tension on
CLOTH SHRINKAGE
With Particular Reference to Sanforizing

By Wm. H. Harriss

Cluett-Peabody & Co.

FIRST, let us look at the cotton weaving industry in a broad way. We are all in the textile business to try to make a profit and for many years the emphasis has been mostly on *try*. In this day of precision manufacturing we now have the further obligation to furnish the ever more discriminating consuming public with serviceable fabrics. A poor automobile cannot be sold today—they are all good within their class. So it should be with fabrics and the mill that continues to make poor fabrics of their class must promptly correct their faults or fold up ere long. Modern practice now demands that we add to the old standard cloth specifications some knowledge of potential shrinkage performance.

Since the early days of the textile industry, cotton goods have been manufactured on a six dimensional basis. Attention has been concentrated on proper width, warp yarn, sley, filling yarn, pick and weight, for any given construction. True, good "hand" and "cover" at times got consideration, but in a highly competitive market these qualifications were often ignored. Even within our own memory some of the primary specifications had rather a loose application. Subsequently, much time and constructive thoughts were given by various textile interests, on practical tolerances for all of these dimensions, resulting in the promulgation of the "Worth Street Rules," which are today generally recognized by the trade. However, these rules make no attempt to standardize yarn twist, nor cloth shrinkage performance.

Consuming Public "Shrink Conscious"

Since the advent of Sanforizing the entire textile trade as well as the general consuming public has become "shrink conscious" when thinking of fabrics and we now realize that other elements constituting a fabric, particularly the twist and tension in the component yarns, must get more consideration; as these contents have a direct bearing on a fabric's finishing and shrinking potentialities. So then, it is equally important that a fair tolerance should now be established for the twist content on cotton fabrics, certainly on standard grey goods. Twist must be put under better control as some grey fabrics have reached the market with filling twist all the way from standard to 40% over, the latter resulting in excessive shrinkage, detrimental to all concerned. It would seem impractical to attempt to place a tolerance on cloth shrinkage *itself* but rather on those elements that cause shrinkage.

It is with the hope of having the mills give more attention to this twist problem and possible cloth shrinkage resulting, that I come before you, looking for your help in solving twist evils that seem to exist in some mills. Also the question of excessive tension on both weaving yarns, which is usually necessitated by excessive twist, should have attention.

Before going further into the subject of yarn twist and cloth shrinkage, it might be well at this point to give a short description of how the Sanforizing process concerns shrinkage, in case there are some present who are not familiar with the subject. (Then followed a graphic illustration of Sanforizing, together with exhibits of Sanforized fabrics.)

Excessive Twist Causes Excessive Shrinkage

We have made many shrinkage tests ourselves on standard grey goods and find that excessive twist seems to cause excessive shrinkage. However, we have to make our test on samples that reach us through the marts of trade, so have no way of eliminating other variables from mill to mill; such as setting of the loom, tension in shuttle and on warp yarn, that might also cause some of the excess shrinkage. On the other hand you mill men are in positions to prove your own cloth shrinkage performance by test on the same loom under constant conditions other than twist. Our tests on the same construction of grey goods, but in different mills, often show quite a variation in shrinkage both warp and filling and the finger of suspicion points to corresponding variance in twist.

However, before we go into the position of a fair twist tolerance it would seem well to examine thoroughly the present warp and filling twist standards as to their fitness for modern improved mill practices.

Is it not true that our present twist standards were handed down to us from the days when mule spinning was largely in use, particularly for filling; and is it not for this reason that we have the wide divergence between the two standards? If 3¼ times the square root gives

(*Continued on Page 49*)

Presented at meeting of Weavers and Slashers Section of the South Carolina Division of the Southern Textile Association, Clemson, S. C., November 11th.

THE CAUSE *and* CONTROL *of* SHRINKAGE

Why Fabrics Shrink

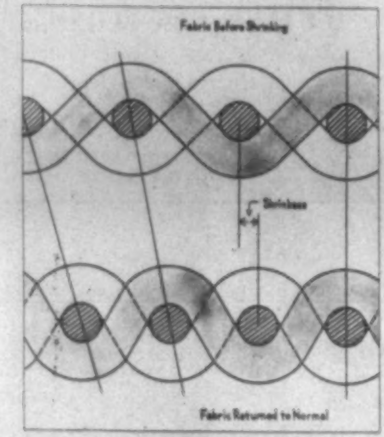
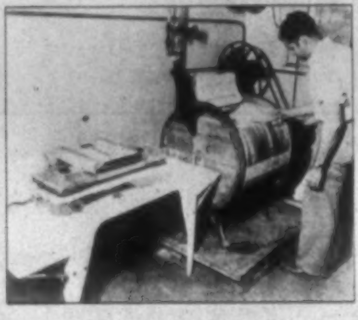


Diagram of Cross-Section of Fabric

During manufacturing and finishing the yarns of which a fabric is made are stretched from their normal shape and position. When washed, the yarns return to normal thus shrinking the fabric.

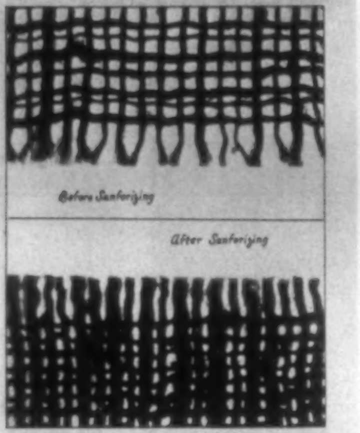
Standard Testing Equipment



Shrinkage Test

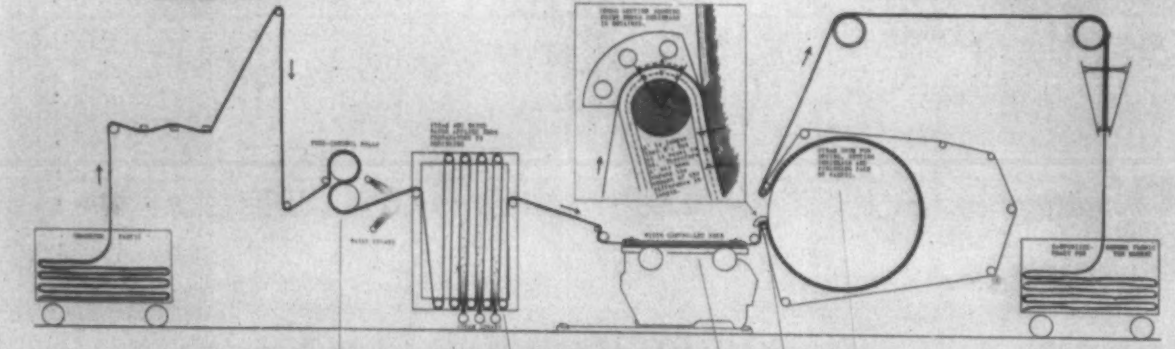
To determine its potential shrinkage, a fabric is wash tested according to the Government Wash Test CCC-T-191a. This indicates how much the fabric must be shrunk in length and width

The Effect of Sanforizing

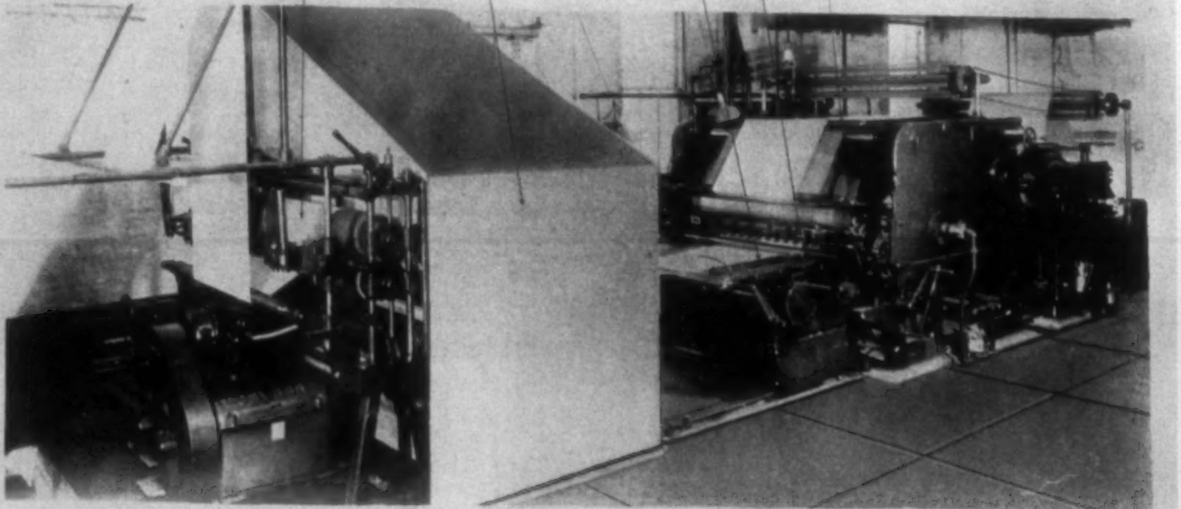


Micro-Photograph of Fabric

Sanforizing mechanically adjusts the construction of the fabric to normal, increases the wearing qualities and improves the "hand".



The Sanforizing Process



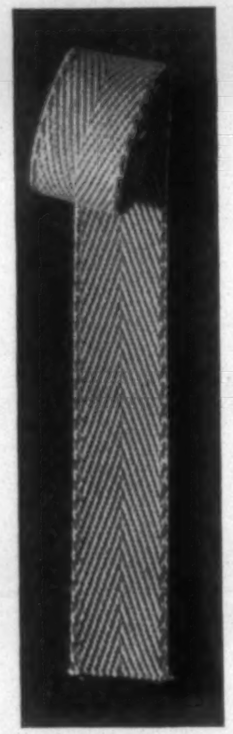
The Sanforizing Machine

Cutler Spinning and Twisting Tape

(U. S. Patent No. 2,179,655)

CUTLER SAK REGULAR
24/4 Ply
Flat Herringbone

CUTLER SAK ECONOMY
20/2 Ply
Herringbone Center
Raised Selvages



1. *Cutler Patented Spinning and Twisting Tape* embraces all textile spinning tape (on reels or frames) having the following characteristics:

Material — — Wholly or predominantly cotton.
Staple — — — 1″ or longer.
Weight — — More than 55 yards to pound in 5/8″ width.
Thickness — Less than .037″.
Strength — — Minimum break of 100 lbs. in 5/8″ width.

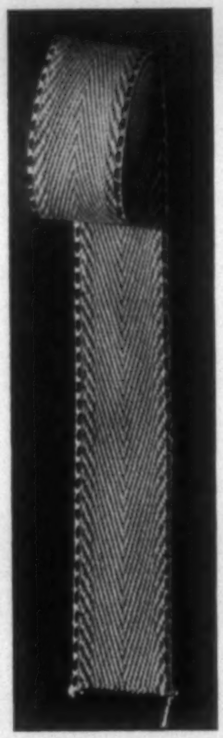
2. *Cutler Sak—pictured above*

Cotton — — — — — 1½″ Sak
Price per yard, 5/8″ .026

Yardage, 5/8″ — — 75 per lb.
Price per spin., 5/8″ .0208

Break, 5/8″ — — — 260 lbs.
Instal. cost per spin., tape .0208)
= .0308
Wall, Regular — — .027″
Instal. cost per spin., labor .01)

Wall, Economy — .030/.032″
Cost per spin. per year, tape .0104)
" " " " ", labor .005) = .0154



3. *What is the MINIMUM Annual Saving per Spindle—Cutler Tape versus the best Unpatented Tape—at 1c. per K. W. H.?*

Input power — — — .085)
Increased yarn — — .06) 15-1/5c.
Increased life — — .007)

4. *Purchases of Patented Cutler Tape are solicited by:*

Licensees:

Barber Manufacturing Company, Charlotte, N. C.
" " " , Lowell, Mass.
Krout & Fite Mfg. Company, Philadelphia, Pa.

Patentee:

Roger W. Cutler, Woodside Bldg., Greenville, S. C.
" " " , 141 Milk Street, Boston, Mass.

Agents:

Byrd Miller, Woodside Building, Greenville, S. C.
(for Virginia, No. Carolina, So. Carolina)
A. C. Boyd, 1071 Bellevue Ave. Dr., N.E., Atlanta, Ga.
(for Georgia, Alabama, Tennessee)

Cutler Spinning and Twisting Tape

The interesting facts about Cutler Sak Tape are:

a. It is the result of eight years of research work.

b. It covers more than 3,500,000 spindles out of a total of 16,000,000 tape-driven spindles on cotton.

c. The *minimum* annual saving over that of any other tape manufactured is 15-1/5c. a spindle; therefore, the textile industry benefits annually to the extent of $2,432,000.

d. The net saving to the mills is 92½%; the net profit to the Patentee is 7½%.

e. The patent on Cutler Tape is based on a complete knowledge by the Patent Office of all spinning and twisting tapes previously used.

f. If any mill is in a position to make 24/4 yarn having a Suter break of 5½ pounds minimum, the Patentee will purchase the yarn at a price of 65c. and have it woven into Cutler Tape under contract with the mill, at scheduled tape prices.

g. *Power saving* in textile spinning and twisting tape is determined solely by weight (yards per pound).

h. *Increased yarn* in textile spinning and twisting tape is determined solely by wall dimension.

i. *Durability* in textile spinning and twisting tape is determined solely by flexibility and staple-length characteristics.

j. Tape selvages markedly thicker than the center section of the tape consume excess power and the center section clogs with lint and fly. However, any mill which prefers this type of tape may purchase Cutler Economy, which is pictured on the opposite page.

k. The National Bureau of Standards recently conducted tests on comparative power savings, weights, and wall thicknesses of textile spinning and twisting tapes for the information of the United States Patent Office. The Massachusetts Institute of Technology conducted similar tests for the Patentee. Independent textile engineers have furnished reports on comparative power savings and on spindle, front-roll, and drum speeds. Over a period of eight years the Patentee has had many such tests run in mills and laboratories. The results of all this work are available to the mills in the form of accurate graphs depicting every kind of textile spinning and twisting tape possible of manufacture.

l. If a mill will submit to the Boston Office of the Patentee a 3-yard sample of both the spinning and twisting tape which it is now using, the samples will be analyzed in the light of the accurate charts and figures on hand, and a report will be sent to the mill giving information on input power, increased yarn, and increased tape life.

m. If a copy of this advertisement is desired by any mill, such copy will be furnished upon request.

Personal News

Raymond H. Chase has become agent and assistant treasurer of the Spencer Mills, Inc., Spindale, N. C.

J. Wilson McArver has resigned as superintendent of the Hampton Spinning Mills, Clover, S. C.

M. D. Pittman has become superintendent of the reorganized St. Pauls Cotton Mill.

Thurmond Chatham, president of the Chatham Mfg. Co., Elkin, N. C., was the guest speaker at the meeting of the Lexington, N. C., Rotary Club recently.

Jack Pirkle, of Stonewall, Miss., has accepted the position of superintendent of the Faytex Mills, Fayetteville, N. C.

F. L. Lee, Auburn graduate in textile engineering, is now connected with the designing department of the Eagle & Phenix Mills, Columbus, Ga.

J. W. Brown has resigned as overseer of spinning at Roanoke Mills No. 2, Roanoke Rapids, N. C., to accept a similar position at the Henderson (N. C.) Cotton Mills.

Charles E. Gravely, formerly with Draper Corp., in the Spartanburg Shops, is now connected with the Bemis Bag Co., Talladega, Ala., as a textile engineer.

J. C. Farmer has resigned as superintendent of the Rockfish Mills, Cumberland, N. C., and Hope Mills, N. C., to become superintendent of the Henderson (N. C.) Cotton Mills.

Lee McLemore has resigned as superintendent of the Bladenboro (N. C.) Cotton Mills to become superintendent of the Rockfish Mills at Cumberland, N. C., and Hope Mills, N. C.

Albert N. Whiteside has been made superintendent of the Victoria Cotton Mills, Rock Hill, S. C., succeeding J. J. Rauch, resigned. Mr. Whitesides has been night superintendent for several years.

H. H. Ayers, second hand in weaving, Chadwick-Hoskins, Mill No. 5, Pineville, N. C., has been promoted to the position of overseer of weaving.

Albert Carmen, formerly overseer of weaving, Chesnee, S. C., has become overseer of weaving for Cutter Mfg. Co., Rock Hill, S. C.

T. E. Stone, formerly overseer of weaving at the Chadwick-Hoskins Mill, No. 5, Pineville, N. C., is now overseer of weaving, Chesnee, S. C.

R. D. Bunn has been transferred from superintendent of the Henderson Cotton Mills, Henderson, N. C., to superintendent of the Harriett Cotton Mills No. 1, of the same place.

A. G. Odell, assistant secretary and manager of the Kerr Bleaching & Finishing Works, Concord, N. C., has been chosen chairman of the Alumni Council of Duke University.

Ernest M. Boys, for some time superintendent of Pisgah Mills, Brevard, N. C., has resigned that position to become superintendent of the newly-organized mills at Kinston, N. C.

Marshall Beattie, A. G. Furman and R. T. Stevens have been appointed as an executive committee to operate the Victor-Monaghan Co. until a successor to T. M. Marchant is elected.

C. W. Hill, formerly assistant overseer of spinning, Saxon Mills, Spartanburg, S. C., has been transferred and promoted to overseer spinning of Saxon Mills, Chesnee Plant, Chesnee, S. C.

E. P. Cofield, for the past three years superintendent of the Edna Mills Corp. at Reidsville, N. C., has been elected superintendent of the Erlanger and Nokomis Mills at Lexington, N. C.

G. W. Johnson has been transferred from superintendent of the Bradford Mills, Prattville, Ala., to a similar position with the Marlboro Mills, McColl, S. C., which have recently been leased by Hesslein & Co., of New York.

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J. N. PEASE & COMPANY
ENGINEERS—ARCHITECTS
JOHNSTON BUILDING
CHARLOTTE, N. C.

A. H. Cottingham, general manager of the Victor-Monaghan Mills, Greenville, S. C., has been appointed chairman of the textile division for the third annual South Carolina Safety Conference.

R. L. Harris, secretary-treasurer of the Roxboro Cotton Mills, Roxboro, N. C., has announced his candidacy for the Democratic nomination for Lieutenant Governor of North Carolina in 1940.

W. Linton Howard, who recently terminated a number of years with Callaway Mills at LaGrange Ga., is now connected with Wm. D. Ellis 3rd, of Southern Mills, Inc., Atlanta, in the development of its fabric department.

J. Foster Barnwell has been elected president of the Abbeville Mills, Abbeville, S. C., taking the place of H. A. Hatch, resigned. Mr. Barnwell has been connected with the mills for 40 years.

Ralph Higgins has resigned as overseer of spinning in Roanoke Mills No. 2, Roanoke Rapids, N. C., to return to his former position as carder and spinner at the Pilot Cotton Mills, Raleigh, N. C.

T. W. Cooper, formerly with Avondale Mills at Alexander City, Ala., has accepted a position as second hand in spinning with the Bemis Bros. Bag Co., Talladega, Ala. Mr. Cooper graduated in textile engineering from Auburn in 1938.

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Clinton Company
CLINTON, IOWA

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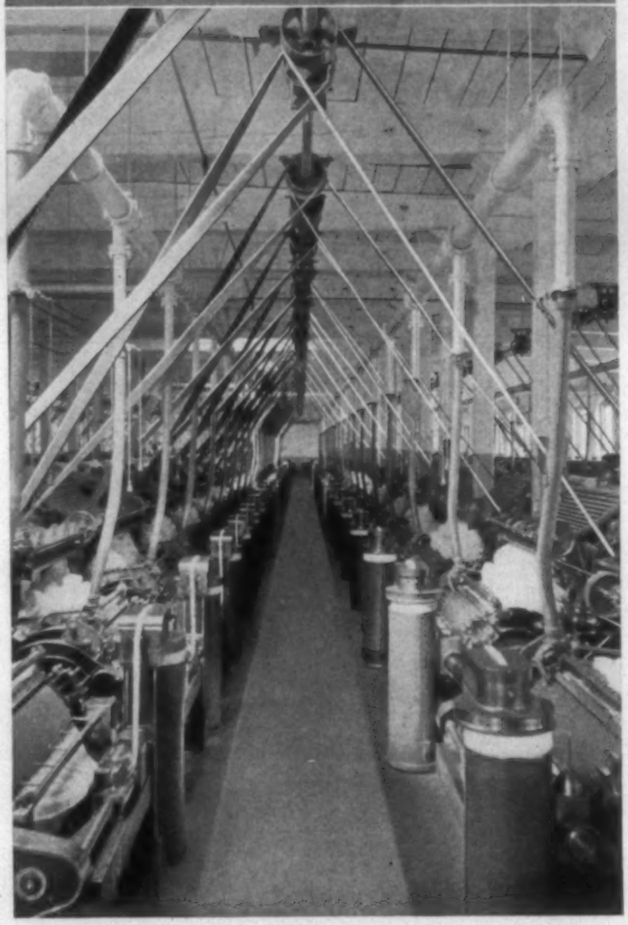

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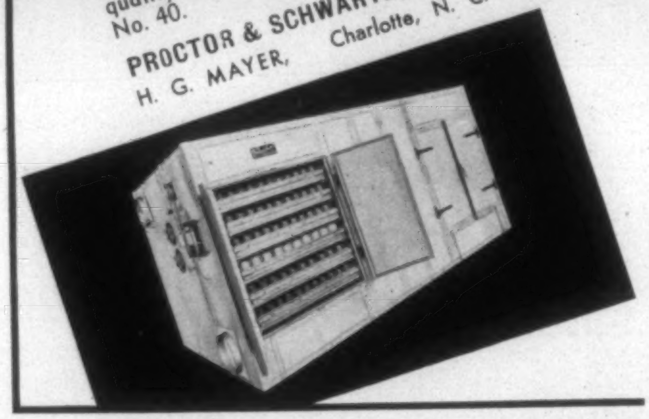

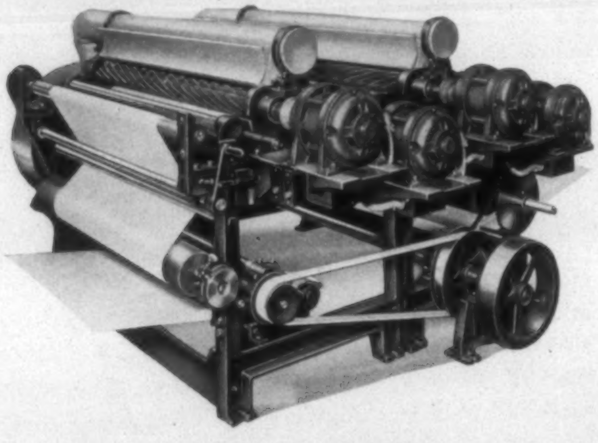

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SPRINGFIELD, VERMONT

OBITUARY

T. M. MARCHANT

Greenville, S. C.—T. M. Marchant, 60, president of the Victor-Monaghan Co., and one of the leading figures in the South's textile industry, died of a heart attack after witnessing the Clemson-Wake Forest football game at Clemson, S. C., November 11th.

Born on July 8, 1880, Mr. Marchant was one of eight children of Martin Luther Marchant and Mary Smith Marchant. His father had been superintendent of the old Batesville Mill during the Civil War.

After working at a series of jobs with the Parker interests in Greenville and Union, in 1912 he was elected vice-president of the Monaghan Mills and Victor Mfg. Co., subsidiaries of the Parker Co. In 1916, the Parker company sold eight mills and organized Victor-Monaghan, Mr. Marchant being made vice-president. In 1923 upon retirement of W. E. Beattie, Mr. Marchant was made president and treasurer, the position he held at his death.

Other business affiliations included directorships in the First National Bank, the Piedmont & Northern Railway, Piedmont Mfg. Co., and Aragon-Baldwin Mills. He was a vice-president of the Marion Mfg. Co., in North Carolina, and of the Wallace Mfg. Co., at Jonesville.

As President of Cotton Manufacturers' Association of South Carolina, before NRA, he pleaded for abandonment of child labor, and he abolished it in his own mills. As president of the American Cotton Manufacturers' Association he was a leader in writing Code No. 1 of NRA.

He is survived by his wife, Mrs. Jessie Speed Marchant, and two sons, T. M. Marchant, Jr., and Preston Speed Marchant, all of Greenville. One sister, Mrs. A. H. Cottingham, of Greenville, also survives.

PAUL W. MATHESON

Paul W. Matheson, for the past three years representative of Norris Bros., textile manufacturers, died at his home in Charlotte, October 30th.

Mr. Matheson was an alumnus of Georgia Tech and a member of the Kappa Sigma fraternity.

CHARLES M. DUNN

Charles M. Dunn, 81, pioneer cotton mill executive, who had an intimate part in the building of Gaston County's great textile industry, died at a Charlotte hospital, November 2nd.

Mr. Dunn was a native of Mecklenburg County. When 17 years old he went to McAdenville and became connected with the old Penhook Mill there, one of the first in

Gaston County. In 1888 he helped build and became the first superintendent of the Gastonia Mfg. Co. mill, the first cotton mill to be erected in Gastonia.

In 1889 he became the first superintendent of the Avon Mill there ,then went as first superintendent of the Loray Mill. In 1905 he went with the Gray Mfg. Co. as superintendent, then teamed with the late C. B. Armstrong and who, with Mr. Dunn's brother-in-law, George Gray, of Gastonia, was largely responsible for the development of Gaston County's textile industry, and became superintendent of the Clara and Armstrong Mills.

After ten years he became superintendent of Myrtle Mills, from which position he retired and moved to Charlotte.

JULIUS A. SCHACHNER, SR.

Julius Anthony Schachner, Sr., president of the Schachner Leather and Belting Co., Charlotte, N. C., died at a local hospital November 9th.

Mr. Schachner had been a resident of Charlotte since 1896 and was past grand knight of the Knights of Columbus. He was a native of Laurinburg.

Surviving are the widow, who was the former Miss Bessie McKane; four sons, Julius A. Schachner, Jr., Joseph F., and Bernard McK., all of Charlotte, and Paul G. Schachner, of Black Mountain; five daughters, Mrs. Edward Vidal, Mrs. Edward W. Zieverink, Rose and Barbara Schachner, all of Charlotte, and Mrs. Henry Vidal, of Woodside, Long Island; one brother, J. F. Schachner, of Charlotte; one sister, Mrs. W. T. Shelby, of Charlotte; and eight grandchildren.

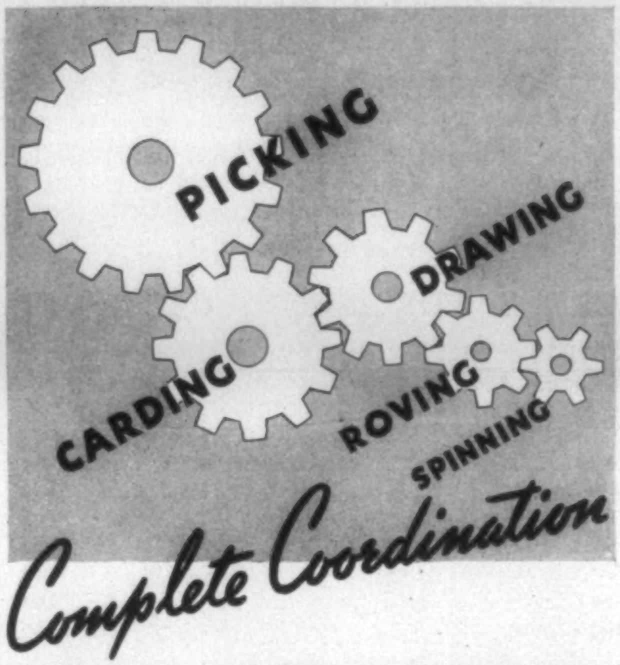
W. N. RANDLE

Rome, Ga.—W. N. Randle, textile executive, died suddenly while attending the Georgia Tech-Kentucky football game in Atlanta, collapsing in the grandstand near the end of the game.

Mr. Randle, faculty chairman of athletics at Tech from 1900 to 1917 and a graduate of Philadelphia Textile School, built and served as first superintendent of the Hadley Mills at Roanoke. He was later with the Piedmont Mills, of Greenville, S. C., and was head of the textile designing department of the Anchor Duck Mills.

CHAS. L. ASHLEY

Chas. L. Ashley, of Atlanta, for many years Georgia and Alabama representative of the Dary Ring Traveler Co., died recently after an extended illness. Mr. Ashley had a host of friends. Editorial note: We regret that due to our not having seen the newspaper account we can not give other details.



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DAMAGED PAGE(S)

TEXTILE BULLETIN

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Ellis Royal - - - - - - - Associate Editor

SUBSCRIPTION

One year payable in advance	$1.50
Other Countries in Postal Union	3.00
Single Copies	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Buyers' Pressure

The cotton textile industry is now witnessing the concerted pressure of buyers and they have made some progress in depressing prices upon fabrics made of print cloth numbers.

In spite of the fact that prices have advanced there is not, as yet, a fair profit to be derived from the manufacture of print cloths and if this drive against prices is effective, mills will soon return to operations which show red upon their books.

This is one time when mills should be able to resist the pressure tactics of the buyers and when it would be far better to run for a short time without orders than to make price concessions.

Immense orders for war materials are now being placed and even though there may not be any large takings of textiles, the expenditure of very large sums for airplanes and munitions will place money in circulation and give buying power to those who will consume textiles.

Averaging reports from 11,315 retail stores in 31 cities, the National Retail Credit Association says that, during October, collections were 3.3 per cent higher and total sales 6.5 per cent higher. Increases were noted in 22 cities in collections, 24 in credit sales and 25 in total sales.

These increases are only the beginning and do not reflect the orders placed by Great Britain and France since the embargo law was repealed.

For many years buyers of cotton goods have been manipulating prices to the detriment of the mills and to their own advantage, but this is a time when the mills should take charge of the situation and when they are in position to demand and obtain prices which will show profits.

It is unfortunate, but nevertheless true, that many of the cotton goods selling agents, in seeking to curry favor with the buyers, reflect their attitude and circulate their propaganda in discussions with the mills which they are supposed to represent.

Submarines and Jute Tariff

The German submarines and the need of materials for sand bags has accomplished something which the cotton textile industry has not, in recent years, been able to do, and that is reduce importations of jute and jute products.

For many years jute raised in India with labor which receives about 10 cents per day and manufactured at Calcutta and Dundee with low priced labor, has been coming into the United States almost free of tariff and has kept out of work thousands of Americans who could manufacture osnaburgs and other cotton goods used by the bag trade.

That situation has been made possible by a lobby which has been described as the most powerful in the United States and almost every New England Congressman and Senator has persistently voted for free trade in jute.

The difficulty of shipping jute from India and the English and French demand for jute for sand bags, has caused bag manufacturers in the United States to turn again to osnaburgs and heavy sheeting and already we hear of idle mills being put in operation and booking orders for many months ahead.

The jute lobby with New England support for "free trade in jute" has persistently favored the "10 cents per day" workers of India while our own textile workers were without employment.

The Nylon Menace

The Du Pont Company recently sent to all editors of textile publications, a pair of ladies' 51-gauge full-fashioned hosiery and a pair of men's full-fashioned hosiery, both made of Nylon, with the suggestion that they be worn and the results noted.

The editor of the TEXTILE BULLETIN and his wife have worn the sample hosiery for a considerable period and we are in position to make a report upon them.

The beauty of the hose is unquestionable and, up to the present time, they have shown no runs or evidences of wear. We had heard that Nylon hose had a metallic feel but, if so, it is so slight as to be scarcely noticeable.

It does appear to us that they wrinkle more than silk or cotton hose and it is claimed that in warm weather their inability to absorb perspiration will cause them to slide upon the leg and to wrinkle excessively, but, as we have not worn them in warm weather, we can not report upon that feature.

We believe that it is well for the full-fashioned hosiery industry to make an honest appreciation of the possibilities of hosiery made of Nylon and similar yarns and the effect which they will [illegible] upon the consumption of hosiery.

Judged by our short experience with [illegible] ples which we have worn, Nylon [illegible] very closely approach the beauty [illegible] and has wearing qualities far in ex[illegible]

Silk hosiery has beauty, but it is [illegible] very greatly improve its strength or [illegible] stand wear, and we are very muc[illegible] women will find it economical to we[illegible] ioned hosiery made of Nylon or si[illegible]

If the appearance of Nylon hosier[illegible] inferior to silk hosiery there would be [illegible] fear but it is extremely difficult to [illegible] them from silk.

It will be, at least, a year before any [illegible] ume of Nylon yarns for hosiery will be [illegible] but it is now advisable for full-fashioned [illegible] mills to take stock of future possibilities.

What You Get

According to the *Manufacturers' News,* a United States Senator recently gave the following technical explanation:

> "We get the money from you . . . and you don't get it all back. . . . We take your shirt and give you a little piece of the shirt tail. Then you go back home waving it and shouting, 'Look what Uncle Sam gave me.' "

Tom Marchant

T. M. Marchant, or Tom Marchant, as he has been affectionately known throughout the textile industry of the South, died suddenly on November 11th, and news of his passing has brought a feeling of sadness to a multitude of friends.

Tom Marchant was a friendly man and there was no more universally popular figure in the industry. His good humor was proverbial.

He served for a number of years as president of the Cotton Manufacturers' Association of South Carolina and one term as president of the American Cotton Manufacturers' Association.

Whenever there was to be a conference of leaders, Tom Marchant was one of the first to be included and he will be sadly missed.

A Sound Position

There has recently been a strike at the P. H. Hanes Knitting Co., Winston-Salem, N. C., during which the management issued the following [illegible]

Ame[illegible] work bec[illegible] union, anothe[illegible] ment because he [illegible]

Ericson Pro[illegible]

Prof. E. E. Ericson, the Univer[illegible] Carolina associate professor, who [illegible] charged with specializing in the teachin[illegible] cialism and communism and distinguished [illegible] self by dining in a negro hotel, at Durham, N. [illegible] with a negro communist named Ford, has been promoted to full professor with a salary increase.

After the Durham episode, there was a very general demand that he be discharged and allowed to connect himself with some Northern institution where his ideas of social equality with negroes would not be offensive, but President Frank Graham refused to release him and now gives him his reward through promotion.

Mill News

GREER, S. C.—Franklin Cotton Mills, of Greer, closed since March 10th, have resumed operations on a two-shift schedule.

The plant has 10,832 spindles and 312 looms.

LEXINGTON, N. C.—The Dakotah Mill in Davidson County has resumed work after having been closed several months. The mill, which has a payroll of about $5,000 [illegible] ating n[illegible]lly, closed down be- [illegible]

[illegible] 0,000

[illegible] & Co., of New York, [illegible] on Mills for a period of [illegible] cern will manufacture narrow [illegible] t it is understood that they will [illegible] re twills, drills, sateens, etc.

[illegible] was formerly a sales agent for the Marl- [illegible] ills.

[illegible] NAPOLIS, N. C.—The Cannon Mills Co. is erecting [illegible] large warehouses at its two Kannapolis plants. Two [illegible] them are situated at Plant 4 in the southern end of the city, and three are at Plant 1, in the heart of the town. Each of the buildings is 50 by 100. They are being built of brick and wood and will be used for storage of cotton and cotton textile goods.

FAYETTEVILLE, N. C.—Work has recently been completed on the installation of $100,000 worth of new spinning equipment at the Puritan Weaving Co. here. This company is engaged in the manufacture of rayon piece goods. One hundred and sixty additional operatives have been added to the payroll since this new machinery has been installed and put into production.

MAYO, S. C.—The Mary Louise Mills here closed for several years, will be reopened around January 1st, J. A. Neisler, president of the Mayo Mills, Inc., the new operating company, announced. Twenty-four spinning frames are to be installed soon. The plant will make yarns to be [illegible] ished and processed at the Neisler Mill at Kings Moun- [illegible] C.

[illegible] ficers of the new corporation are C. E. Neisler, [illegible] sident; H. R. Neisler, secretary, and P. M. [illegible] rer.

[illegible] C.—Efforts to obtain a satisfactory plan [illegible] ation of Cowpens Mills have failed thus [illegible] g to determine what action is to be taken [illegible] ompany has been set by Federal Judge [illegible] November 24th, it has been learned.

[illegible] C.—A charter has been granted to Perfec- [illegible] c. Principal office, Weldon. To operate a [illegible] uthorized capital stock $100,000, subscribed [illegible], by F. H. Gregory, Halifax, W. T. Shaw, [illegible]. Bounds, Weldon, and others.

[illegible] rstood that this organization is taking over [illegible] Shaw Cotton Mill, which has been closed for [illegible] s.

[illegible] AN, GA.—The local branch of the Morgan Cot- [illegible] Mills of Georgia, idle several years, will resume operations as soon as the plant can be placed in condition.

Ralph Sanders, executive of the Morgan Mills, of Laurel Hill, N. C., has been here organizing the office staff and mill help. The mill will manufacture the type of material used for the backs of rugs. It formerly made tire yarn similar to that made by the Laurel Hill plant.

CHESTER, S. C.—Capt. Elliott Springs, president of the Springs Cotton Mills Co. chain, made known that 400 new Draper Model X looms have been installed in the Eureka plant at Chester, replacing the same number of Model E looms. They are for the manufacture of spun rayon and cotton materials.

George S. Harris, of Charlotte, vice-president of Springs Cotton Mills Co., says the building program of three units of the Springs company includes an expenditure of $375,000.

The addition to the Fort Mill, S. C., No. 1 plant of Springs Cotton Mill Co. will be started before the end of November. It will be two stories 300 by 200 feet and have 120,000 square feet of floor space. It will cost $250,000 and house additional looms, spinning and carding equipment to manufacture sheeting. The machinery will cost $100,000. It will be completed May 1st and provide work for 150 more people.

MASTER MECHANICS' SECTION

The Flame and the Weld

Correct Flame Adjustment Is Essential To Good Workmanship

THE importance of proper flame adjustment in oxy-acetylene welding and cutting is readily apparent when it is realized that the sole purpose of the various items of equipment used is to enable the operator to produce and control at will an oxy-acetylene flame of the size and character best suited for the work at hand.

One unique feature of the oxy-acetylene flame is the fact that its chemical characteristics, and consequently its action on molten metal can be varied over a wide range. Determination of these characteristics is brought about by the relative proportions of oxygen and acetylene in the mixture which burns at the blow-pipe tip. This proportion is accurately controlled by the blow-pipe oxygen and acetylene valves. The blow-pipe valves are not simply shut-off valves to provide a means for turning the gases on and off; they give the operator complete control of the flame adjustment at all times.

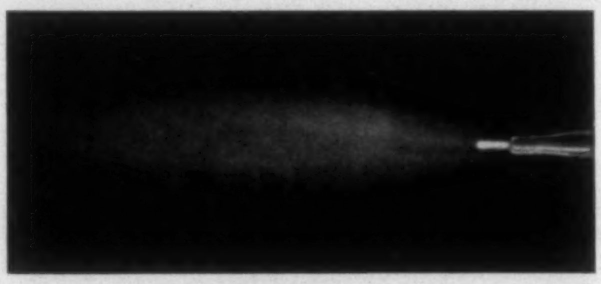


Fig. 1—The neutral flame has an approximately one-to-one mixture of oxygen and acetylene.

Once the blow-pipe has been lighted in accordance with the manufacturer's directions, the flame must be properly adjusted before the operator can proceed to weld. To accomplish this, the operator, in addition to knowing the composition of the metal on which he is to work, must be familiar with the different types of oxy-acetylene flame adjustments and the methods of attaining them.

Three Types of Flame

Actual choice of the flame adjustment is dependent upon the composition of the base metal or upon the welding method which the operator desires to use. The accompanying illustrations will serve as a guide in the choice of welding methods and in the determination of proper flame adjustment for a variety of commonly used commercial metals and alloys.

If the three types of flame adjustments shown, the neutral flame is of particular importance to the operator because it is used for a wide variety of welding (and cutting) operations. It is also important because it always serves as a basis of reference in establishing an oxidizing flame, and is often established before adjusting to a carburizing flame.

Fig. 2—This flame is variously called an excess acetylene, a reducing, or a carburizing flame.

Characteristics of Neutral Flame

The neutral flame occurs when an approximately one-to-one mixture of oxygen and acetylene is lighted at the blow-pipe tip. It is called a neutral flame because there is no excess of either oxygen or acetylene. As is shown in Fig. 1, it has a characteristic appearance. There are two sharply defined zones. The inside portion of the flame consists of a brilliant white cone from 1/16 to ¾-inch

Fig. 3—The oxidizing or excess oxygen flame is obtained by supplying additional oxygen to a neutral flame.

long, depending on the size of tip used, and surrounding this inner cone is a second larger cone or "envelope flame" which is only faintly luminous and which has a delicate bluish color.

Characteristics of the Excess Acetylene Flame

When the oxygen and acetylene proportions are varied from the one-to-one mixture, a decided change takes place in the character of the flame. Slightly more than this proportion of acetylene in the mixture will produce a flame which is variously called an excess acetylene, a reducing, or a carburizing flame. As shown in Fig. 2, this type of flame will be found to consist of three zones instead of the two which exist in the neutral flame. There still remains the inner cone and the bluish outer envelope, but between these, surrounding the inner cone, is an intermediate cone of whitish color. The length of this intermediate or excess acetylene cone varies with the amount of excess acetylene in the flame.

Characteristics of the Excess Oxygen Flame

At the opposite end of the flame adjustment range is the "oxidizing" flame which is produced when oxygen is in excess in the mixture. Its characteristics are shown in Fig. 3. The oxidizing flame has the general appearance of the neutral flame but can be readily identified by its shorter inner cone which is "necked in" on the sides, is not as sharply defined, and acquires a purplish tinge as compared with the brilliant white inner cone of the neutral flame.

A slightly oxidizing flame is used for all bronze-welding and bronze-surfacing applications, while a more strongly oxidizing flame is used in fusion welding brass and bronze. In the latter case, the correctly adjusted flame is the one that will melt the base metal and maintain a bright surfaced puddle which is free from film or coating.

Adjusting the Flame

After the correct welding head or tip for the work at hand has been attached to the blow-pipe and proper oxygen and acetylene pressures have been adjusted at the regulators (all according to the apparatus manufacturers' recommendations and instructions), it is a simple matter to obtain the desired flame adjustment. First light the blow-pipe, with the blow-pipe acetylene valve one quarter turn open (if low-pressure, open wide) and the blow-pipe oxygen valve just slightly open. The acetylene will burn with a smoky yellow flame and will give off quantities of fine black soot.

Excess Acetylene

Now open the blow-pipe oxygen valve slowly. The flame will gradually change from yellow to blue and will show the characteristics of the carburizing or excess acetylene flame. There will be three distinct parts to the flame—a brilliant but feathery-edged inner cone surrounded by a secondary cone, and a bluish outer envelope forming a third zone.

Most medium-pressure blow-pipes will produce a slightly carburizing flame at recommended gas pressures when both oxygen and acetylene blow-pipe valves are wide open. If a greater excess of acetylene is desired at this point, close the blow-pipe oxygen valve slowly until the secondary cone is of the length required. Conversely, to decrease the excess of acetylene in the mixture, close the blow-pipe acetylene valve gradually until the secondary cone is correctly proportioned with respect to the brilliant and sharply defined inner cone. Carburizing or reducing flames are usually measured by the ratio between the length of the acetylene cone or "feather" and that of the inner cone, both being measured from the end of the blow-pipe tip.

If any difficulty is encountered in obtaining the desired ratio between the lengths of the acetylene cone and inner cone, first adjust the flame to neutral, and then increase the acetylene until the desired ratio is established.

Neutral

To obtain a neutral flame proceed as above with an excess acetylene flame. Then close the blow-pipe acetylene valve very slowly so that the secondary cone gets steadily smaller until it finally disappears completely. Just at this point of complete disappearance the neutral flame is formed.

Because the difference between the neutral and the carburizing flames is much more readily apparent than that between the neutral and oxidizing flames, an adjustment of the flame to neutral should always be made from the excess acetylene side. In other words, first adjust the flame so that it shows the secondary cone of excess acetylene, then reduce the amount of acetylene until this secondary cone just disappears.

Excess Oxygen

If an oxidizing flame is desired, proceed as though adjusting for a neutral flame. Then, when the neutral flame is obtained, either increase the oxygen or decrease the acetylene until the correct amount of excess oxygen is noticeable in the flame. The amount of excess oxygen in the flame will vary inversely with the length of the inner cone as compared with that of the neutral flame. Therefore, the proper oxidizing flame can be easily recognized when the length of the inner cone has been shortened the desired amount. The more the inner cone of the neutral flame is shortened, the greater the excess of oxygen in the flame. In some cases, as in fusion welding brass and bronze, the exact adjustment has to be determined by the action of the flame on the molten metal.

Check Adjustment Regularly

As welding proceeds, the adjustment of the flame should be checked by the operator occasionally to see that there is no variation. Changes may occur from a number of perfectly natural causes. For instance, any fluctuation in the control of gases by the regulators may make it necessary to adjust the flame from time to time.

It will take only a moment for the operator to lift the blow-pipe, hold it in a convenient position and check the flame with his goggle-covered eyes. Any necessary adjustment can then be quickly made in the manner previously described.

Reprinted through the courtesy of The Linde Air Products Co., unit of Union Carbide and Carbon Corp.

Cloth Shrinkage

(*Continued from Page 26*)

Through error in printing, this portion of the talk by Mr. Harriss made at the meeting of the Weavers and Slashers Section of the South Carolina Division of the Southern Textile Association, was omitted on page 49, where it should be.

sufficient twist to make a good filling yarn, it does not seem reasonable that so much as 4¾ times is needed for warp yarn, although we all know the latter takes more punishment in the loom. As a matter of fact there appears to be a tendency in some mills to go up on both twist rather than down—something like 3½ for filling and 5 for warp. Isn't this rather surprising in view of the improvements that have been made in all mill preparatory processes and in modern warp sizing? We know that the necessary twists depends upon the cotton used, but the general length and character of cotton staple and ginning has also been greatly improved since these old standards were established. It costs money to put twist in yarn and a *less twist* trend rather than *more* would seem to be better in line with modern practice.

Our Textile Schools can help through research in checking these twist standards and when the present or new ones are agreed upon by the industry, a fair tolerance should be established controlling the variation of twist in a given fabric. Any twist tolerance must necessarily be based upon a good average performance of the spinning frame. It is said by some that even the modern frame with tape drive gives a variation in twist from side to side of 10 to 15%. This does not seem probable but if true it would in itself limit the minimum tolerance on twist.

Many of the present standard grey goods need no change of construction to give practical finished width when Sanforized. Some are too narrow and are being widened. Others are on the border line of danger and on these the twist problem becomes serious.

Take the standard 39-inch print cloths—68x72, 72x76 and 80x80 constructions. All of these must be handled just right by the finisher if he is to produce a finished and Sanforized result of 35 to 35½ inches in width; otherwise they may come in as narrow as 34½ inches, to meet the Sanforized standard (residual shrinkage not in excess of 1%). However, such an extremely narrow result is not the finisher's fault, as in some instances two pieces of print cloth both 39 inches in the grey but from different mills, will finish and Sanforize with nearly one inch difference in the width, when put through identical finishing processes. Here the trouble must be largely a question of twist in the filling.

It is pretty generally admitted that until quite recently it was hardly possible to manufacture print cloth in the grey at market prices and come out with a profit. Confronted with this eventuality some mills were driven to the necessity of buying short cotton for the filling. Having done this they were further forced to put much more than standard twist in the yarn to make it spin and weave properly. In so doing they probably did not realize what trouble they were building up for all others down the line—finisher, converter and cutter.

Many elements take up the shrinkage potentialities of a fabric and we feel that twist in component yarns is of prime consideration—as a rule, more twist, more shrinkage. In time mills may find that this podicy of shorter cotton with more twist will react to their detriment by

(*Continued on Page 50*)

Patent Awarded On Power-Saving Twisting and Spinning Tape

After several years of research work and approximately two years of litgiation, a patent has been awarded to Roger W. Cutler by the U. S. Patent Office on his invention of power-saving spinning and twisting tape. This invention has already been recognized by the grant of patents in Canada, Italy, and Belgium. Patents are pending in Great Britain, India, and the Argentine.

According to Roger W. Cutler, reports of tests conducted by the Massachusetts Institute of Technology, by the National Bureau of Standards, and by many mills, show three distinct advantages, namely, a. power saving of from 10 to 18 per cent; b. spindle speed increase of from 200 to 400 r.p.m.; c. increased production of approximately 2 to 3 per cent.

The lightness and pliability of the taps, says Mr. Cutler, are such that it offers little resistance to the flexing of the tape at the whorl, and will decrease slippage at this point by as much as 70 to 75 per cent. Also, he continues, the savings to be made in power consumption will amount to at least 16 cents a spindle a year, with possibilities of a saving of as much as 22 to 24 cents a spindle.

Another feature claimed for the new tape by Mr. Cutler is the elimination of excess variation in twists due to tape slippage.

Scott Is Named Chief Of Cotton Chemical Bureau

Washington, D. C.—Dr. Walter M. Scott has been appointed chief of the cotton chemical finishing division of the Southern Regional Research Laboratory at New Orleans, Dr. Henry G. Knight, chief of the Bureau of Agricultural Chemistry and Engineering, announced. Dr. Scott will be responsible for the scientific and administrative work of the division, which will involve broad research and development work to improve or modify by chemical treatment cotton fiber cotton yarns, cotton textiles and cotton fabrics.

Chemical Firm Plans Plant At Salisbury

Salisbury, N. C.—Establishment of a manufacturing plant here by the Proctor Chemical Company, Inc., which has been located in this city as a distdibuting agency for textile chemicals for the past year and a half, has been announced by E. E. Proctor, president of the organization.

The company has leased a building, and special equipment along the most improved lines is now being installed for the manufacture of textile chemicals and specialties. The plant probably will be in operation by December 1st.

WHAT'S NEW

In Textile Mill Equipment and Processes

All Stainless Steel Dye Beck

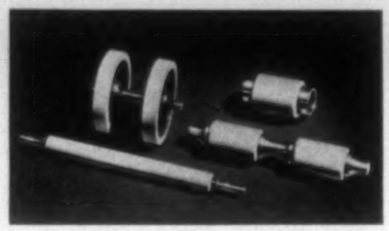
Illustrated is the new Type "S" all stainless steel dye beck, for sample and small lot dyeings, made by H. W. Butterworth Sons Co., Philadelphia, Pa.

Specifications include all welded stainless steel tub, with removable perforated dye partition, 4" outlet and welded in steam pipes. Oval and idler reels of all welded splash-proof construction, self-aligning ball bearings on both reels. Stainless steel pin rail.

Cast iron side frames supporting fully enclosed gear reducer and motor.

New Roll Covers

From Dayton, O., comes the announcement of new roll covers by the Textile Products Division of the Dayton Rubber Mfg. Co. The new covers are called Tempered Dayco Roll Covers and the manufacturer states that they offer greatly increased efficiency and economy. The new covers are said to have the proper coefficient of friction and are static-free and oil-resisting. Being vulcanized they have no cold flow and are unaffected by temperature changes.



Tempered Dayco Roll Covers are said to be the result of 25 years' experience by technical experts and have been proved by more than a year's extensive use in textile mills.

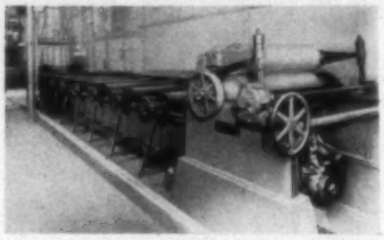
Bulletin On Alligator V-Belt Fasteners

Bulletin No. V-200 has been issued by the Flexible Steel Lacing Co., Chicago, covering a new line of Alligator V-Belt Fasteners for "B," "C" and "D" section V-Belts. The fasteners are used only on crosswoven fabric V-Belts and should not be used to shorten or repair stretched out or broken endless cord V.-Belts.

The bulletin shows how the fasteners are applied and illustrates various types of applications where endless V-Belts could not be used without costly dismantling of the drives.

Progressive Boil-Off Machine

H. W. Butterworth Sons Co. announces their Progressive Boil Off Machine, made with from 4 to 8 beams. Each beam has individual clutch with friction band tension device. Beam rolls are equipped with special device for clamping cloth when starting batch, saving the operator from reaching over boiling liquor.



The delivery end of the machine is equipped with latest type extracting padder equipped with latest type micro-set housings, which records given amount of roll pressure by means of dial, thus permitting accurate setting from batch to batch.

Norma-Hoffman Adds New Series To Line

Norma-Hoffmann Bearings Corp., Stamford, Conn., announces two new series of extra light ball bearings designed as "6000" and "6100." These

(*Continued on Page 42*)

PRECISION BOBBINS
Uniform in Quality
Uniform in Size
Uniform in Finish
NEW ENGLAND BOBBIN & SHUTTLE CO.
NASHUA NEW HAMPSHIRE
Sou. Repr.: E. M. POTTER, 914 First National Bank Building, Charlotte, N. C.

AHCOVEL-A

A BETTER SYNTHETIC SOFTENER OF THE SUBSTANTIVE TYPE

ADDS NEW SOFTNESS AND DRAPE TO RAYONS

1. Also suitable for cotton, wool and silk. **2.** Resistant to repeated washing and dry cleaning. **3.** Non-greasy, odorless finish, which will not discolor with heat or age. **4.** Easy to apply; economical to use.

★WRITE FOR DESCRIPTIVE CIRCULARS AND SAMPLES.

ARNOLD-HOFFMAN & COMPANY, INC.

Established 1815 **PROVIDENCE, RHODE ISLAND** Plant at Dighton, Mass.

NEW YORK • BOSTON • PHILADELPHIA • CHARLOTTE • COLUMBUS • GREENVILLE

WHAT'S NEW

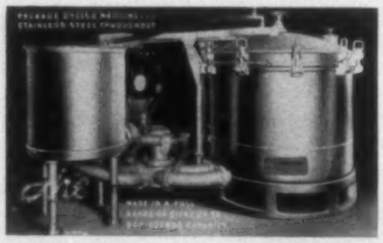
(Continued from Page 40)

new bearings are to meet the demands of manufacturers of portable tools and other small high-speed units in which minimum weight is sought, center distances are restricted, and designers are cramped for space, according to the manufacturers.

In the "6000" Series Felt-Sealed Bearing—furnished with single felt seal as "6000," or with felt seal and side plate or shield as '6000-P"—the sealing devices are wholly within the confines of the bearing and therefore not exposed to injury. The felt seals are firmly held in the grooves of the outer ring, but are removable to permit examination, cleaning or relubrication of the bearing. The wide, solid inner and outer rings make housing inserts unnecessary. The "6000" and "6000-P" Series are obtainable in sizes up to 25 m/m bore.

Stainless Steel Package Yarn Dyeing Machine

Recently introduced by H. W. Butterworth Sons Co., Philadelphia, Pa., is their Stainless Steel Package Yarn Dyeing Machine, which is said to incorporate new principles of design and new and exclusive features as aids in dyeing all varieties of yarn in the various processes, including the more difficult developed and Indanthrenes. Automatic time control and reversal of the direction of flow of the solutions are said to be obtained by simple and quickly made adjustments of the timing instruments in the control panel.



The panel also houses the recording thermometer, pressure guage, colored light indicators—showing the direction of flow at all times, and a warning bell that can be set to indicate completion of each cycle of the dyeing operation. All the machines are equipped with the manufacturers' new, more substantial, non-clogging spiral fluted type spindles, according to the announcement.

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Weaving and Slashing Problems

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In this last work he has made many discoveries, about which he will tell you today. I am pleased to introduce, as your next speaker, Mr. William H. Harriss, of the Sanforizing Division, Cluett-Peabody Company, New York City. (Applause.)

William H. Harriss, Sanforizing Division, Cluett, Peabody & Co., New York City: First, gentlemen, I want to thank the Southern Textile Association and my friend Dave Clark for this opportunity to appear before you. But don't believe a word of what Dave has told you. He and I have been in the textile business longer than I shall admit, because I do not want to date Dave and do not want to date myself, and every day I am learning something. When Dave and I got out of college we knew it all. We were talking one night and we agreed that warp would never be drawn by machinery. Many people say now that cotton will never be picked by machines. It may be, though, or it may not.

(Mr. Harriss' talk will be found on page 26.)

Chairman: Thank you, Mr. Harris. I am sure we have all enjoyed this talk, and I think it gives these mill superintendents another viewpoint of this twist question. I doubt if many of us have thought much about twist in the yarn in relation to the finished piece of cloth. Usually our only interest in twist is which one will give us the strongest yarn, in order to make our looms run better.

Mr. Clark: I should like to ask Mr. Harriss two questions. First, what is the greatest variation you have seen, Mr. Harris, on 39" print cloths that come out from the Sanforizing machine?

Mr. Harriss: The well-made 39" print cloth, 80 squares, etc., when properly made should finish 35¼" to 35½" after proper Sanforizing. I would say the greatest extreme of difference is one inch, which is quite a lot. That is over 3%.

Mr. Clark: Have you known mills to change that condition by changing the twist?

Mr. Harriss: Yes. This matter has been before a lot of mills, and a great many of them are doing some experimenting. The time has come when the dye-mill man finds he must know the shrinkage performance of his own cloth, and the time will come when he will get a black eye in New York if after Sanforizing the cloth is less than 35 inches. There is nothing the converter can do if after putting the cloth through the Sanforizing machine it comes out 34 inches.

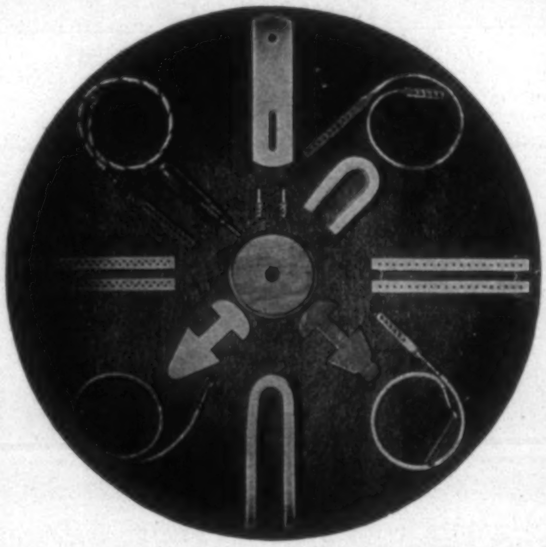
Chairman: Are there any questions?

If a mill's cloths finish narrow, are they always the ones with excessively high twist?

Mr. Harriss: No. That varies. I think the answer is that up until recently no man could make any money making print cloths. Maybe he economized by buying shorter cotton. It varies with different lots of cotton. The shorter the cotton, and the weaker, the more twist.

(Continued on Page 46)

Rice Dobby Chain Co.



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Cotton Goods Markets

New York.—A recent release by Wm. P. Jacobs, executive vice-president of the Cotton Manufacturers' Association of South Carolina, gives a slant on the present price situation that might be enlightening to some who have been over optimistic about recent sales. The release follows:

"Recent statements in the press indicate that some folks see better times ahead for textiles. In our eagerness to believe such good news, we are all prone to do more thinking with the heart than the head; and wishful thinking too often leads to expectations which cannot be realized.

"In truth, one swallow does not make a summer, and as in this instance when the swallow is a 'war bird', disillusionment can easily follow.

"The recent textile spurt came as a 'God-send' to some mills which had suffered from a protracted lull in sales and weak prices. Some of our mills sold up as far as the end of the year, but sales on the whole were made at prices which represent narrow manufacturing margins, if not actual losses. A comparison of the market for leading print cloth and broadcloth constructions of July 1, 1933, with October 21, 1939, shows much lower prices per yard today than back during the dark days immediately following the closing of all our banks. Representative of these comparisons are the following:

		July 1, 1933	Oct. 21, 1939
38½"	64 x 60-5.35	6⅜ Cents	5½ Cents
39 "	68 x 72-4.75	7¾ "	6¼ "
39 "	80 x 80-4.00	8⅞ "	7¼ "
37 "	100 x 60-4.10 Broadcloth	8¾ "	7½ "

"This comparison, taken from the published market prices in *The New York Journal of Commerce*, is not only convincing, but actually alarming.

"The recent textile spurt was short-lived, as usual, preceded by a lull of several months, and has been followed by a lull which has already lasted over six weeks. Meanwhile, labor costs have greatly increased, 316 per cent from 1890 to 1935, 65 per cent from 1932 to 1938. To these increases has been added the 32½-cents minimum wage of October, 1939. Prosperity in these uncertain times certainly justifies rejoicing, but—What constitutes prosperity?"

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Cotton Yarn Markets

Philadelphia.—One of the most promising things about the sale yarns situation at present is the fact that all indications point to the supposition that yarns sold throughout the past two months have been going into consumption at a more rapid rate than has been the custom in the past several years, and there is nothing at this time to indicate that this trend of consumption will not continue well into 1940.

There have been reports of buyers who are balking at placing their January business at the present time, adding that they feel that when the present backlog of orders is diminished somewhat they will be able to shop for better prices. This policy may bring some surprises, because leading yarn producers, particularly in the combed yarn section, seem to be determined to operate at a profit, and they are not letting the large orders recently booked go to their heads and force them into third shift operations. Inventory estimates and approximated customer requirements seem to show nothing for the mills to become alarmed about in the present situation, and as long as they are determined not to accumulate stocks by excessive operations it is likely that the buyers who are waiting to buy at reduced prices may be forced into the market to fill their minimum requirements.

In spite of the larger than seasonable volume of cotton yarn that has moved in the last couple of months, it is reported that the credit authorities say the situation as regards collections is very healthy for this period of the year.

This is attributed in many cases to the promptness of turnover of merchandise since rising employment and larger income made it possible for the public to do a lot of deferred buying. More rapid turnover is credited with being the most potent single influence in sustaining the higher price levels for yarns and many other manufacturing materials, and yarn distributors say that as long as the rate of merchandise turnover is maintained, or increased, the credit standing of the majority of yarn consumers will improve.

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Weaving and Slashing Problems

(*Continued from Page 43*)

Mr. Parks: I should like to ask a question. I want to know whether, if a mill has a twist that stays constant all the time, regardless of whether it is a high or a low twist, the cloth will remain the same.

Mr. Harriss: I think the answer to that question is absolutely yes, if they are using the same type of cotton from the same section. Even mills using Western cotton will sometimes find Western cotton of such inferior characteristics that it requires much more twist. Even when a mill does not deliberately buy short cotton, it is an ethical whether a man has a right to put in more twist to make it spin and weave properly when he knows he is building up trouble for somebody in the future.

Chairman: That brings up a point of view that certainly some of us had not thought of.

Mr. Parks: Let's suppose that the yarn on one side of the room runs well and on the other side runs badly and that there is just a little bit more twist on the bad side than on the good side, yet that filling goes indiscriminately into the same cloth. Would you find from one filling change to the next in the cloth that the cloth would vary in width in the same cut?

Mr. Harris: I can not answer your question directly, because I do not think the variation you speak of would be enough to show more than a quarter of an inch, or something like that. We have found, however, that by taking two bobbins, one high twist and one light twist, there will show a decided difference in the cloth. As I say, we find cloths on the market that vary 40% in twist. In order to make the cloth right the yarn must be right, it is a combined job of spinning and weaving. I claim that we do not know enough about twist. We ought to put it on a standard basis. It ought to be standardized and a tolerance put on it.

Week-End Humidification of Weave Room

Chairman Simmons: We will go ahead now with the discussion of our questions. The first one reads as follows: *"What is the best generally accepted practice in humidifying the weave room over the week-end? What can be done to stop filling from sloughing off on Monday mornings?"*

I think the problem there is in the second sentence. When the weaves comes in on Monday morning he has a lot of trouble with the filling sloughing off the quill, and he thinks that is probably due to the weave room humidity being so much lower over the week-end than it is while the looms are operating. So we should like to have some of you tell just what your practice is in humidifying and also heating the weave room over the week-end. Mr. Lockman, how do you handle that?

Frank D. Lockman, Supt. Monarch Mills Co., Lockhart: We handle it in different ways. Of course, we use hot air to heat our mill; we do not have an up-to-date steam system to heat it. In a cold spell, when we have to blow in a lot of hot air over the week-end, sometimes we go down on Sunday and run the humidifier for an hour or two. And always in a cold spell we start the humidifier about 45 minutes before the weave room starts up. Also, we always put some sort of chemical in the humidifier water, in order to have the water penetrate the cotton. I have found that within a few minutes after putting the chemical in the water it will stop the sloughing off, when sometimes a whole bobbin has sloughed off.

Chairman: Do you try at all to work your filling down low on Friday night?

Mr. Lockman: Not at all.

Chairman: Mr. Lyons, how do you handle this problem?

Joe Lyons, Supt., Orr Cotton Mills, Anderson, S. C.: We handle it as the gentleman said, except that we do let it run down on week-ends. We have a filling recondition-

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ing machine, and on Monday morning we take everything out of the batteries and recondition it. We find that is the only way we can get along.

Chairman Simmons: You take it all out of the batteries and recondition it?

Mr. Lyons: Yes, sir. That is, in the winter time we do, when we have steam on in the mill. In the summer time and in the spring we do not take it out of the batteries but take it out of the boxes.

Chairman: Dou you start your humidifiers early in the morning?

Mr. Lyons: Yes, sir, we do on Monday mornings. On a particularly cold week-end we would run them on Sunday.

Chairman: I imagine almost everyone here conditions filling with a conditioning fluid, but there might be some who condition with steam. Is there anyone here who conditions it with steam? I know I have noticed that with the old method of conditioning filling with steam we did not seem to hear so much about this sloughing off on Monday mornings as we did after we started using conditioning fluid. Is that your experience, Mr. Lockman? Would you say that is true?

Mr. Lockman: I never have conditioned any filling.

Chairman: You do not condition any at all?

Mr. Lockcan: No.

Salvaging Dirty or Oily Filling

Chairman: Let's go on to the next question: *"What is the best practice for salvaging dirty or oily fillings?"*

This particular mill can not run the filling if it gets on the floor by some means or other or if it gets too much dirt or too many little specks of oil on it; they can not run it in the cloth, and this man wants to know the best method of handling dirty or oily filling. How can you salvage it or can you practically salvage a good bit of it, or will most of it have to go into waste? Mr. Stansell, of Victor-Monaghan, what is your practice on this?

C. F. Stansell, Supt., Monaghan Plant, Victor-Monaghan Co., Greenville, S. C.: We carry our bad filling back to the copping machines, and there we work it up, salvaging what we can and making waste out of the rest.

Chairman: Say you have a quill that has an oily spot near the bottom, do you recondition that filling down to the oily spot?

Mr. Stansell: That is right.

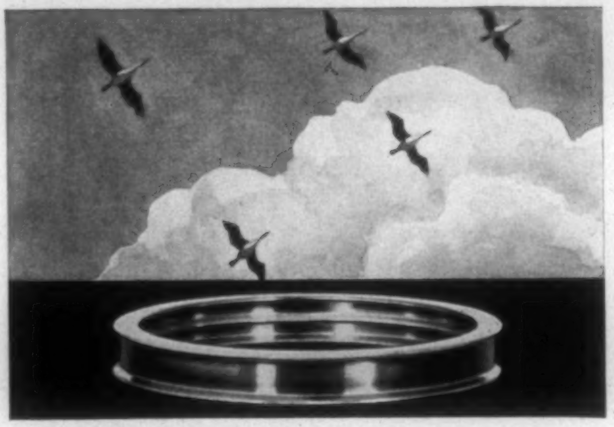
Chairman: And then make waste of the rest?

Mr. Stansell: Yes, sir. We have a girl who winds off that filling, and then we recondition it. We keep account of the waste.

Chairman Simmons: Some others give us their method on that. I know you must have a certain amount of dirty or oily filling to take care of in some way. Mr. Stutts, how do you handle that?

Robert T. Stutts, Supt., Simpsonville Plant, Woodside Cotton Mills Co., Simpsonville, S. C.: Well, we make print cloth, and we sell a lot of cloth around locally, to farmers and other local people. We sometimes collect a lot of oily filling and put it on one particular loom and weave it all on that loom. Of course, we know the cloth is going to be oily and dirty when it comes off, but we have a sale for it locally.

(*To be continued*)



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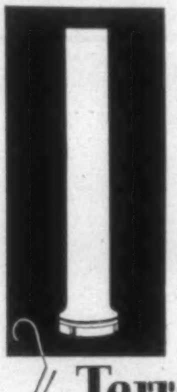

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North Carolina Cotton Manufacturers Hold Successful Meeting

(*Continued from Page 20*)

Mills Co., Winston-Salem. This plant operated 432,360 man-hours without a lost-time accident.

In Group 3 the Longhurst plant of the Roxboro Cotton Mills, Roxboro, is the trophy winner, operating 667,129 hours without a lost-time accident.

Revolution Cotton Mills, Greensboro, was trophy winner in Group 4, operating 1,344,155 man-hours with only one lost-time accident.

Close attention was given to the report of Bernard M. Cone, of Greensboro, chairman of the Taxation Committee. Mr. Cone went into the windfall and processing taxes in considerable detail. He advised members of the Association to get a good set of accountants to make a thorough examination of mill books over a period of years. He stated that there had been no decision from the tax board as yet on textile cases, and he expressed the opinion that the "lean period" 1927-1932, selected by the Government for comparison purposes, might not be the best period, and that individual mills might be able to show that other periods should be taken into account in deciding on taxes or refunds.

"Let your accountants go back six years before the lean period," said Mr. Cone; "and let them go forward the same number of years. See what margins you can establish; get your costs and profits for the various periods; also how much cotton you processed. The margin of the lean years is not a fair standard of comparison.

He proposed that mills take the periods 1920-1927, 1927-1932, and 1936-1938, for comparison with the processing tax year of 1935.

Carl Cunningham, of Atlanta, spoke briefly on the traffic situation for F. J. Haywood, of Concord, and Hunter Marshall, the secretary, submitted the report on the Stonewall Jackson Training School for Alex R. Howard, of Concord. R. D. Hall, of Belmont, reported on membership, and W. H. Entwistle for the Committee on Resolutions with routine resolutions. Other committee reports were adjourned to the executive luncheon meeting at which John C. Gall, counsel of the National Association of Manufacturers, was the guest speaker.

Banquet and Prize Winners

The convention ended Friday evening, November 3rd, with the annual banquet, at which Retiring President White acted as toastmaster. Governor Clyde R. Hoye, of North Carolina, was the guest speaker. The customary medal was presented to Past President White by Harvey W. Moore, and prize winners in the golf tournament and skeet shoot were announced.

Winners in the golf tournament were as follows: A. G. Myers, low net; Stuart W. Cramer, Jr., low gross; John K. Rutledge, Jr., second low net; J. Holmes Davis, Jr., second low gross; J. E. Millis, high net; Marion W. Heiss, high gross.

Prize winners in the allied membership were: Wesley Heston, low net; C. D. Gray, low gross; Fritz Zweifel, high net; F. Dickinson, high gross.

Prize winners in the annual skeet shoot were: First, R. C. Moore; second, J. E. Moore; third, Harvey W. Moore; fourth, Robbins Lowe; fifth, Dr. Claudius T. Murchison.

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Firestone Plant Has 16 Mos. Without Lost Time Accident

There has not been a loss time accident in the Firestone Mills, Inc., at Gastonia, since July 1, 1938.

This large plant has accumulated over four million man hours without one loss time accident. This is said to be a record for the textile industry for North Carolina.

3,358,000 Bales of Cotton Sold Under Subsidy

Washington, D. C.—The Agriculture Department reported that sales of cotton and cotton products under the export subsidy program during the three-month period ending October 31st totaled 3,358,000 bales.

Included in the sales were cotton products equivalent to 159,000 bales.

N. C. State College New Textile Building Open

Raleigh, N. C.—Initial classes have been held in State College's new textile building located on Hillsboro street at the extreme western edge of the campus.

Practically all of the machinery has been moved from Tompkins Hall to the new building, on which construction was started last January. The project was made possible through a PWA grant and a State appropriation.

On the eve of moving into the new structure, members of the Tompkins Textile Society heard Commissioner of Labor Forrest Shuford on Safety. Commissioner Shuford, an alumnus of the State College Textile School, was the first speaker to appear in the new building. He was presented by Dean Thomas Nelson, veteran head of the Textile School. Hubert C. Woodall, of Smithfield, president of the Textile Society, presided.

Total value of the building and equipment is around $500,000, of which the building cost nearly $300,000.

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giving their goods a bad shrinkage reputation in the trade so that they can only be sold at a discount from market quotations. It is also probable that at times mills (without and deliberate intent of using shorter cotton) may even find on their hands lots of Western cotton with such inferior characteristics as to require extra twist to spin and weave properly. Here it is also a question if a mill has the ethical right to solve its own problem by building up one for its customer without passing on the informatiton. Experience has shown that a 39-inch gray print cloth made with the proper cotton and standard twist in the filling should finish and Sanforize 35 inches to 35½ inches and be within the above tolerance. Any deviation from this good practice usually means trouble for all. Some mills let their grey width run down below 39 inches and if this narrow gray width is in combination with hard twist filling and high yarn tensions the finished width problem is indeed serious. In this discussion stress has been placed on width shrinkage, where "he who runs may read," but no less objectionable is excessive warp shrinkage, though it is more difficult to detect in the finished goods.

Some mills are now weaving the 37-inch drill 38½ inches wide for Sanforizing and in time the 39-inch print cloth should be made 40 inches for Sanforizing, then the cutter would be assured of 36-inch finished and shrunk goods. Where gray goods are to be reconstructed for Sanforizing it should be left with the trade whether the present constructions are to remain and the goods simply made wider, or the present warp ends spread and a few picks taken out so as to leave the goods about the present weight and price. Some mills are now realizing that gray constructions can be revised to secure a required finished shrunk result and which are profitable to the mills; as against the old traditional standards that have been made for generations, but without any thought of shrinkage in finishing.

Apparently some converters do not realize that when they specify to their finisher what the Sanforized width of any particular fabric must be, that it may not be possible to obtain such specified width and be within the Sanforized standard mentioned above. While some finishers, by their own method of handling through various processes, may get slightly better widths than others, yet as a general rule the fabric has its fixed shrunk width limitations. When a lot of goods are finished and come up to the Sanforizing machine, first a standard wash test is made and if same calls for 34½-inch Sanforized width there is nothing the finisher can then do, although the converter may have specified 35½-inch width.

The time has already arrived when the trade must fully realize that the consuming public is quite conscious of the textile shrinkage problem. The question of its elimination is before all of us and here to stay; therefore, it behooves all conecrned—mill man, seller, finisher, converter, cutter, jobber and retailer—to work together in producing fabrics and garments of proper width and size and that will not shrink. You mill men who make the grey foundation cloths for the industry, have the obligation to be sure that you are correct in *all* the elements of these basic fabrics else the finishing operations will be made more difficult for all concerned.

1939 Compilation of ASTM Standards On Textile Materials

All of the specifications, tolerances, tests and definitions developed by the American Society for Testing Materials through the work of Committee D-13 on Textile Materials are included in this 1939 textile compilation. Following nine general standards cover textile machines, identification and determination of cotton fibers, general tests on woven fabrics, knit goods, etc., there are three standards covering asbestos roving, yarns and tape. The section on tton is one of the major portions of the book with 21 items included involving test methods for shrinkage, fastness to washing, general methods for testing cotton fiber properties, and cotton yarns and threads. Other specificattions and tests cover hose and belt ducks, numbered ducks, light and medium weight fabrics, and cotton goods for rubber and pyroxlylin coating. Other specifications cover cotton sheeting, terry towerling, tubular sleeving and braids, tire fabrics and tire cord and Holland cloth.

There are two items covering jute yarn and Cuban sugar bags followed by seven pertaining to rayon which include test methods for continuous filament yarns, rayon staple, spun yarns and threads, strength of woven fabrics when wet, fastness to washing, shrinkage, and yarn slippage of silk and rayon fabrics.

The significance of the work in the field of wool is indicated by ten standard specifications and methods covering hard scoured wool in grease wool, wool fineness, fiber length, wool tops (fineness) woolen yarn, worsted yarn, wool felt, wool and part wool fabrics, wool yarns mixed with other fibers, and pile floor covering.

Another valuable part of this textile pamphlet sponsored by Committee D-13 is the abstracts of papers presented at committee meetings. In the current issue there are five included in the Symposium on Spun Rayon and three more are papers presented at the Twenty-fifth Anniversary Meeting of the committee.

Appended to the manual are nine sections covering the following: photomicrographs of common textiles fibers, yarn number conversion table, psychrometric table for relative humidity, and a glossary of terms relating to textile materials. Five proposed methods published for informattion and comment pertain to correction of breaking strength to standard regain, test for accelerated ageing of textiles, quantitative determination of Tussah silk in mixtures with other fibers, quantitative analysis of textiles, composed of wool and lanital and test for shrinkage of grease wool.

Copies of this 320-page publication can be obtained from A. S. T. M. Headquarters, 260 S. Broad St., Philadelphia.

Meadville Unit of American Viscose To Produce Vinyon

Meadville, Pa.—Leroy H. Smith, manager of the local unit of the American Viscose Corp., states the Vinyon will be produced at the Meadville, Pa., unit of the company. He says that Vinyon is Viscose's answer to du Pont's Nylon. Both new fibers are reported to be the nearest approach in appearance to raw silk of any man-made fibers yet developed.

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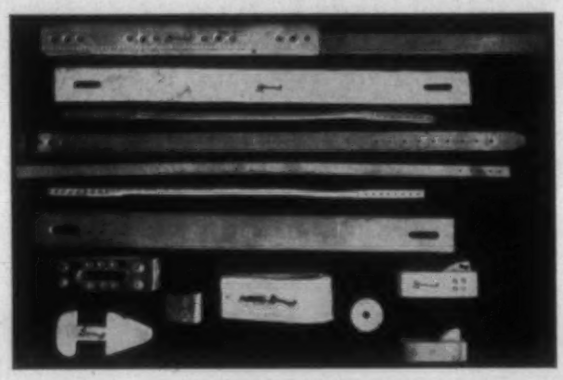

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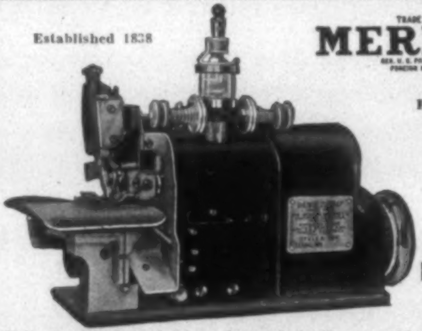

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Wars and the Textile Industry

(*Continued from Page 18*)

the purpose of reviving mummies, but for the purpose of giving life and permanency to the large number of plants in our industry that are in a strategic position to effectively meet competition in adversity as well as prosperity, through a long period of severe competition and narrow margins.

Somehow our efforts at co-operation within the industry have not always produced the results which we hoped for. In too many instances they involve a process of "umbrella holding." I fear that we must face the inevitable fact that we are in the midst of a process of liquidation, and that such a process must necessarily be painful; that the weaker cannot always survive, nor is it always proper economically, that they should be encouraged to survive. I think we should, with foresight and vision, admit that the industry is not likely again to face prosperity until we have learned to balance supply with demand by the economically sound process of sustaining conditions which will protect those units capable of living under severe competitive conditions. I know of no other common denominator that is workable.

War Against High Cost

Another war that we are facing is the war against high cost, and in this war we are likewise losing. It is interesting to note the trend of the costs within the textile industry. We all know, of course, that prices of cotton do not advance permanently. Perhaps that is one of the economic fallacies of the textile industry. The Statistical Abstract of the United States Department of Commerce of 1938 shows that the average price per pound for upland cotton was 8.7 in 1905, and though it arose to dizzying heights during the World War and again since that time has occasionally risen, the average price shown in 1938 was 8.4, even lower than in 1935. There was apparently a brief spurt as a result of pump-priming and subsidies, and in 1935 the price advanced to 12.4, but it has been declining since then. These figures do not include the premium over the market paid for most of the cotton bought by our mills. The price of raw materials, therefore, does not seem to show us a very clear picture in our statistical study, but, on the other hand, our major element of cost has advanced tremendously; and there is a great question about the ultimate effect of the present trend in labor costs. The index of textile wage rates in 1890, according to Mr. Kennedy in his "Profits and Losses in Textiles," stood at 61.2 and had increased 316% by 1935 to 254.7. But confining our competitive picture to the period covered by my friend's prediction, we find that, according to the United States Department of Labor, the average hourly earnings of workers in the cotton goods industry in the United States has increased 68% in seven years from 23.9 cents in 1932 to 39.6 cents in 1938. It should be remembered that all of this increase came prior to the application of the minimum wage of 32½ cents and that if 1939 were in the picture, the percentage increase would be even greater. It should likewise be remembered that these figures include the spare hands, part time workers, whose partial pay naturally reduces the average.

Costs and Selling Price Out of Line

In this study it is proper to compare these unusual increases in labor costs with the trend of prices for textile products. In my office at Clinton, we have kept for many years a record of the sales prices of leading textile constructions. In preparation for this study, I turned back to July 1, 1933. At that time I found the representative print cloth constructions selling as follows:

		July 1, 1933 Cents	Oct. 21, 1939 Cents
38½"	64x60 5.35	6⅜	5½
39 "	68x72 4.75	7¾	6¼
39 "	80x80 4.00	8⅞	7¼
37 "	100x60 4.10 (broadcloths)	8¾	7½

This comparison tells a very significant story. We keep in our office the record of the theoretical manufacturing margins, and this record shows a steady narrowing of the margin in cotton textiles over this period of time, and only in rare spurts has the industry been able to justify its increases in costs.

I must take the precaption of reminding you that I too am very much in favor of any system whereby the workers will receive adequate compensation for their labors, but no matter how altruistic we may be, we cannot avoid the conclusion, that, if a perennial buyers' market keeps the price so low that the mill cannot make its costs, then it cannot afford to pay the steadily increasing portion of its income for any element of cost. The need of the textile workers today is more for security and permanency of employment in the face of our process of liquidation, than it is for an increase in wages. They are receiving today higher wages; they are working shorter hours than ever before in the history of the industry; and the compensation received by the textile workers in the South, considering all factors, is greater than that received by the workers in the textile industry anywhere else in the world, and greater than that received by the workers in most of the other industries in the South, and far greater than that received by farm workers and other unskilled employees.

Modernized Mills Will Win War

This war against mounting manufacturing costs in the face of a steady process of liquidation resolves itself into a frantic race toward machinery short-cuts and other cost-reducing steps to offset the over-balancing increase of costs of labor, which our new social program has saddled upon the industry. Those mills which are able to reduce costs by plant modernization will win the war. With the others it will be a case of payrolls becoming so heavy proportionately, that they will sink.

Foreign Competition

The third war is the economic war which is being waged upon us by foreign textile countries as they export into the United States fabrics which compete with our own domestic products. The Japanese seem to be the most serious competitors. In 1932 we received into this country

(*Continued on Page 56*)

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Permanent Research Body Suggested At Textile Foundation Annual Meeting

New York, N. Y.—Since Textile Foundation directors have gone on record with a program of economic and fundamental scientific textile research, the financing of which will exhaust their present fund in eight or ten years, it is high time that they or some other body representative of the whole industry should take steps to ensure the permanency of these types of research. This was, in effect, the declaration of Dr. E. H. Killheffer in his annual address at the Hotel Pennsylvania, New York, November 22nd, as president of U. S. Institute for Textile Research. He called attention to the fact that the Institute was organized primarily for fundamental research promotion and conduct and was the only textile body that had demonstrated its ability to do so on a co-operative basis of financing, admitting, however, that the Institute had failed thus far to even approximate an adequate program and financing. He referred to a proposal having this objective in view that he made two years ago, and that involved an annual fund of $2,000,000 to be subcribed by the industry, and also to Fuller E. Callaway's proposal of an annual fund of $25,000,000. In conclusion he suggested that the Textile Foundation or the Institute should call a conference, to include the officers of every textile association, with the objective of developing of a plan of self-assessment adequate to finance a comprehensive and continuing research program.

This was the tenth annual meeting of the Institute, and included a luncheon meeting, and an open research conference, the latter on the subject of "Wool Processing in the Light of New Knowledge of the Chemical and Physical Properties of Wool." Following luncheon President Killheffer presented his annual address previously referred to, the remainder of the speaking program being devoted to brief outline reports of Institute and Textile Foundation researches now in progress. Franklin W. Hobbs, president, Arlington Mills and chairman of the Textile Foundation, introduced the speakers, who reported on that body's research: Dr. Robert E. Rose, chairman Advisory Committee on Scientific Research, and a director of the Institute, and Fessenden S. Blalchard, member of the Foundation's Advisory Committee on Economic Research, and chairman of the Institute's Committee on Economic Research.

For the Institute, Chairman W. D. Appel, of the Research Council, reported on the research on Warp Sizing of Spun Rayon and Cotton-Spun Rayon that is starting at North Carolina State College Textile School, Raleigh, N. C., and introduced Dr. A. C. Walker, chairman, Administrative Committee for the Institute's Textile Drying Research at the National Bureau of Standards, now in its third and final year.

Officers and Directors Elected

At the annual meeting of members formal reports were presented, and the following directors were elected for a term to expire in 1942: Arthur Besse, president, National Association of Wool Manufacturers, New York; H. M. Chase, research director, Riverside and Dan River Cotton

Mills, Danville, Va.; Daniel E. Douty, president, U. S. Testing Co., Hoboken, N. J.; Ephraim Freedman, director, R. H. Macy & Co.'s Bureau of Standards, New York; Russell T. Fisher, president, Nattional Association of Cotton Manufacturers, Boston, Mass.; H. Grandage, vice-president, Clark Thread Co., New York; Edward R. Schwarz, professor of textile engineering, Mass. Institute of Technology, Cambridge, Mass.; the chairman of the Research Council, ex-officio.

For a term expiring in 1940: W. M. McLaurine, secretary, American Cotton Manufacturers' Association, Charlotte, N. C., succeeding Philip A. Johnson, resigned.

The only new members of the Board are Messrs. Fisher and McLaurine.

At the meeting of the Board of Directors the following officers and members of the Executive Committee were re-elected: President, Dr. Elvin H. Killheffer; vice-presidents: Louis A. Olney, Edward R. Schwarz; treasurer, Ernest N. Hood; secretary, Charles H. Clark; executive committee: John Bancroft, Jr., Earl Constantine, Alban Eavenson, Ernest N. Hood, Robert E. Rose, Edward R. Schwarz, Douglas G. Woolf, the president ex-officio, and the chairman of the Research Council, ex-officio.

While all of the sessions were well attended, the research conference in the afternoon, which was open to all interested in the subject under discussion, attracted the largest audience of over 100.

DuPont Transfers Men To Its Seaford Plant

Old Hickory, Tenn.—Changes announced at the local unit of the rayon division of the E. I. du Pont de Nemours & Co. are as follows:

Tom B. Evans, Don J. Coon and T. C. Pillow, Jr., have been transferred to the Nylon unit of the company at Seaford, Del. Others who have been notified of their transfer to the same unit include: S. T. Myrick, James W. Mitchell, Thomas M. Clements, Frank D. McKay, Boyce Dillard, James Baker, Tilford Boswell, Glynn M. Johnson, Maynard Eaton, Rufus E. Bowland, Jr., and Wilbon Massey.

Laundrymen Complain About Spun Rayons

Atlantic City, N. J.—American clothing and textile manufacturers can obtain all their dyes in the United States but are failing to use them properly, the American Institute of Laundering was told at their convention here.

Arthur I. Anderson, director of the Association's testing and research laboratories at Joliet, Ill., said that the present conflict in Europe, unlike the World War which cut off the dye supply from Germany, had worked no hardship on the dye industry, but added:

"Shirts, towels and tablecloths nearly always are well dyed. On the other hand we are getting numerous complaints about dyes running or fading in the new highly colored men's sportswear, and particularly in the new spun rayon women's garments."

He said the public frequently blamed laundries for the running or fading but that tests showed that in most cases the dye "did not adequately penetrate the fabric in the first place."

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Wars and the Textile Industry

(Continued from Page 53)

imports of cotton textiles from foreign countries amounting to $27,902,000. These imports had increased by 1937 to $56,910,000. Later this trend of imports was undoubtedly influenced by our agreement with the Japanese, and possibly by their war with China, so that in 1938 our textile imports dropped back below $40,000,000. Since that time they have been increasing materially, and indications are that in 1939 foreign imports of cotton textiles into the United States, resulting possibly from an increase from Japan, and possibly from our reciprocal trade agreements, will probably exceed $45,000,000. This figure is indicated by the fact that imports for the first six months in 1939 show an increase of approximately 17% over the same period for 1938. Wars or no wars, it seems that we have not yet solved this problem of imports of textiles from foreign countries, though with higher living standards and much higher labor costs, we find tariffs inadequate to protect our domestic industry. If in our new social trend, and with our new economic policy, we must follow a nationalized program rather than international, then for the protection of labor, industry, farmers and the American people at large, we must somehow check this steady increase of the imports into this country of products which our American workers can make here. The textile industry in the United States has long since lost its foreign markets. It seems unlikely, in the light of the present social and economic trend, that we shall ever regain them. If, therefore, we are to avoid serious consequences and check the steady process of liquidation of industry and thus protect the payrolls for our workers and the markets for our farmers, it is the least we can do to hold our domestic market for ourselves. This third war is still on, and growing in intensity, and will continue to grow until somehow we Americans develop a more constructive national policy.

Revolution

The fourth war can be more properly termed a revolution, for its attack is not so much upon the industry, as upon cotton fibers. We have been disturbed for some years by the growing use of competitive fibers, such as jute, silk and wool, and we have grown accustomed to this boring from within.

It is rather ironical that the cotton mills are requested to subsidize the farmers to encourage the use of their own cotton product, instead of jute, to cover cotton bales. There was a time when we were almost exclusively on cotton in this section, and then it was the duty of the cotton mills to encourage the substitution of cotton fabrics for jute and other competitors generally. But now the industry seems to be rapidly transferring to rayon, and that places a responsibility for holding to the market for cotton more largely on the farmer.

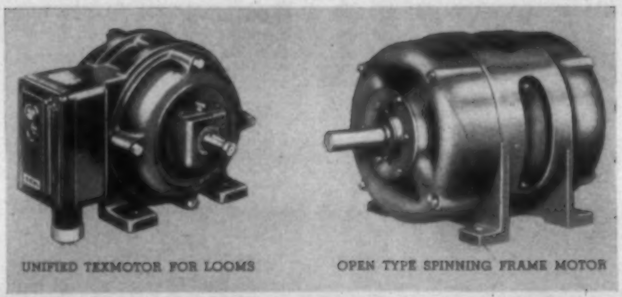
There is, undoubtedly, a revolution within the textile industry with many of our own mills shifting from cotton to spun rayon. Therefore no man can predict the outcome of this revolution. We may always have a textile industry, but no man can predict that it will always be a *cotton* textile industry. A most serious competition for the textile industry, however, resulting from this fourth war comes largely from the revolution within other competitive industries. For today we find paper, glass, rubber and other mineral and agricultural products which, under new chemical processes and modern manufacturing, are usurping the field of woven cotton goods. Only last week I had the pleasure of taking the annual trip with the directors of the P. & N. Railway, and of visiting several paper mills and a suger refinery. I saw one paper bag mill turning out 22,000,000 paper bags a day. That is only one plant supplying enough paper bags for each person in the United States to have one each week. Then in the sugar refinery we saw several men and women engaged in filling, sewing and packaging sugar in cloth bags, and then in the same room the entire process more quickly and economically handled by machines under the direction of fewer workmen, filling and packaging sugar in paper bags. Time may come when most of our products will be enclosed in packages made from materials other than cotton cloth. This was a disquieting picture, particularly when we realize that these operations are running continuously throughout the week, while our cotton mill operations are severely limited by law.

I need not go into a listing of the thousands of products which are today successfully competing with cotton fabrics. Suffice it to say that the steady growth of this revolution of substitution is so serious that it behooves the textile industry to introduce a comprehensive program of research, scientific and economic, that the competitor trends may be better understood, and that our production policies may be more intelligently understood.

In conclusion, therefore, I must admit that I cannot subscribe to the optimistic reports about the future of the textile industry. It is most unfortunate that the public is led to believe that a superficial spurt in the market can have any lasting benefits, for such encouragement may lead to extravagant increases in cost which will not be temporary, but permanent, and may lead to precipitation in the process of liquidation.

There is always a brighter side if the textile industry is smart enough to anticipate its difficulties and to protect itself. I believe there are eleven hundred units in the industry. Co-operation is difficult. We must somehow, somewhere, organize to study our social and economic problems more intensively. Not with a view to encouraging a continuation of a program of higher cost, competitive disadvantages—a program of scarcity—but with the view to building on the sound basis of a program of plenty whereby our present spindles may make more goods at lower costs, that more people may afford them, and more workers may be employed in their production. That is the only sound economy. The building of a program on that basis can perpetuate this industry for the generations to come.

Through the years to come there may be foreign wars and rumors of wars, but we can just as well forget them and concentrate upon the home defense against the growing enemies of industrial progress.



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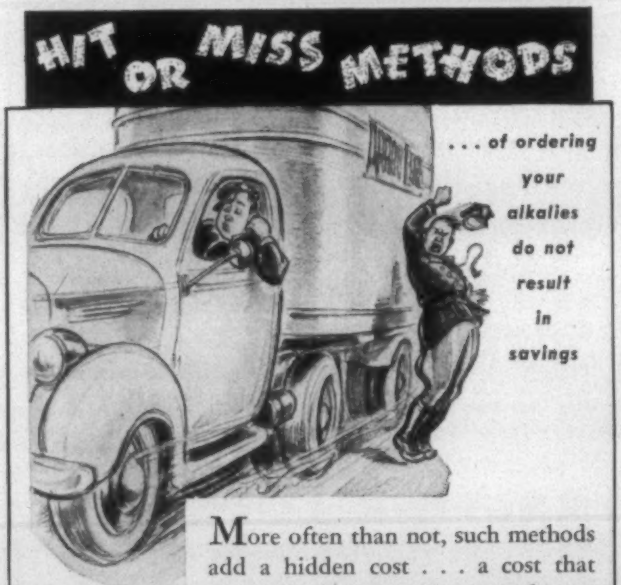
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SOLVAY ALKALIES

October Rayon Yarn Shipments 34,100,000 Pounds

Rayon yarn producers' October shipments of rayon yarn amounted to 34,100,000 pounds as compared with 32,900,000 pounds in September and 25,100,000 pounds in October, 1938, according to the figures compiled by the Textile Economics Bureau.

Total shipments of rayon yarn for the first ten months of the current year total 292,400,000 pounds, as compared with 226,200,000 pounds in the corresponding period of 1938, or an increase of 29 per cent.

Stocks of rayon yarn in the hands of producers at the end of October amounted to 9,400,000 pounds, or about one week's supply. This figure compares with a figure of 13 million pounds held at the end of September. This end of October inventory is also 74 per cent below the 36,100,000 pounds held by producers on October 31st a year ago.

It should be noted that the current stock figure does not represent a general distribution of yarn throughout all of the deniers, but rather slow moving items, odds and ends, etc.

Hercules Powder Co. Reports Nine Months' Earnings

Wilmington, Del.—Hercules Powder Company reports for the first nine months of 1939 net earnings of $3,646,561, after providing for depreciation and Federal taxes. This is equal, after payment of preferred dividends, to $2.47 a share on an average of 1,316,710 shares of common stock outstanding during the period. Figures for the first nine months of 1938 showed net earnings of $1,968,635, equal, after payment of preferred dividends, to $1.20 a share on an average of 1,316,710 shares outstanding.

U. S. Raw Cotton Used By Mills Lower in Sept.

Washington, D. C.—The Census Bureau reported that cotton consumed during September totaled 624,902 bales of lint and 82,446 of linters, compared with 628,448 and 73,646 during August of this year, and 533,399 and 71,149 during September last year.

Cotton on hand September 30th included: In consuming establishments, 870,862 bales of lint and 303,293 of linters, compared with 653,874 and 288,784 on August 31st this year, and 1,107,351 and 264,086 on September 30th last year.

In public storage and at compresses, 14,175,815 bales of lint and 88,444 of linters, compared with 11,805,195 and 81,818 on August 31st this year, and 13,033,511 and 97,189 on September 30th last year.

Imports during September totaled 9,746 bales, compared with 13,494 during August this year, and 10,631 during September last year.

Exports during September totaled 649,057 bales of lint and 30,197 of linters, compared with 218,792 and 33,017 during August this year, and 388,658 and 15,323 during September last year.

Rayon Staple Fiber Processing

(*Continued from Page 22*)

that is what I am talking about now. It is interesting to notice how the breaking strength goes up and down with the number of fibers. You have heard a lot about using coarse denier in making fine yarns, but it just can not be done in making yarns successfully.

Handling of Rayon Staple

Mr. Pegram: We will go on to Question No. 3: *"How do you handle cut fibers on the cards? On drawings? On fly frames?"*

I am going to ask Mr. Bruton, of the Erwin Cotton Mills, to tell us how they do that over there. Take the cards first.

J. K. Bruton, Asst. Overseer Carding, Erwin Cotton Mills Co., No. 3, Cooleemee, N. C.: It is just according to what staple you are running. On our cards, on the staple we have run, we have not changed considerably any settings on the cards, although we have put some attachments on to keep down the waste.

Mr. Pegram: Explain that attachment, please.

Mr. Bruton: In other words, we take off our flat strips at the rear of the cards. Our flats come around and we take off our strips at the back and keep that running all the time.

Chairman Jennings: Drop from the stripper down on to the lap?

Mr. Bruton: Yes, sir.

Mr. Pegram: That is fed on the lap as it goes into the card?

Mr. Bruton: Yes, sir.

Mr. Pegram: The feed roll gradually takes it back in?

Mr. Bruton: Yes, sir.

Chairman Jennings: I was in a mill the other day where they were not taking any strips out of it at all.

Mr. Pegram: How did they do that? Just back the flats off?

Mr. Pegram: How did the web look?

Mr. Jennings: It looked all right—pretty.

Mr. Pegram: Do you know anything about that, Mr. Cobb?

Mr. Cobb: Yes, sir. It is being done on ratines and things like that, in nubby yarn. There are some nubs and slubs made that way. You did not make it clear what type of yarn it was.

Chairman Jennings: 15's, regular yarn.

Mr. Cobb: If your fibers are perfectly open you could do that.

Mr. Jennings: I think he had his flats pulled up to about .012.

Mr. Cobb: You could not get it much closer.

Mr. Pegram: Mr. Inscoe, how dou you set yours? Do you have a graduated scale?

Mr. Inscoe: We have not changed any settings at all

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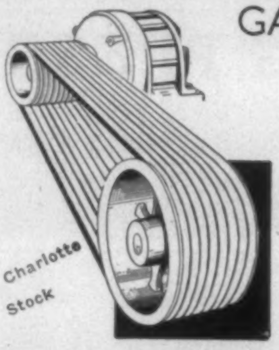

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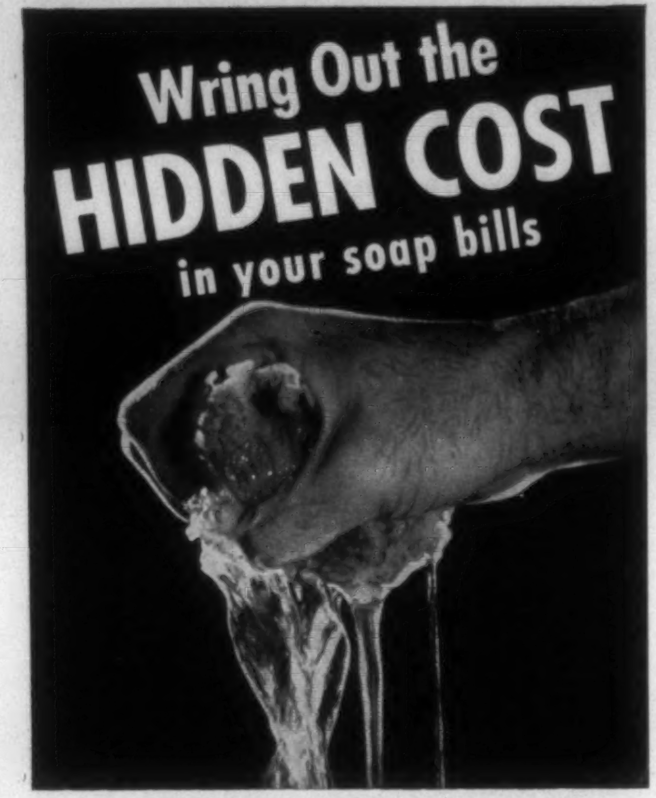

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for rayon so far as the flats are concerned. We run them just the way we had them for cotton.

Mr. Pegram: Are there any questions on card settings for cut staple?

Chairman Jennings: Take 1" staple and 1.50 denier, what gauge would you use when setting the feed roll?

Mr. Pegram: What setting of the feed roll to the licker-in, 1" staple and 1.50 denier?

Mr. Cobb: Twelve would give satisfactory results in there, although most mills are running wide open on that —running .016. The closer it is the more fibers you are going to break. On very coarse we back away on out. If it is fine, set it closer.

A. C. Kimrey, Overseer Carding, Travora Mfg. Co., No. 1, Graham, N. C.: What about the feed plate?

Mr. Kimney: We found we had to back off a little bit farther with the long-nosed feed plate.

Mr. Pegram: How far do you set it?

Mr. Kimrey: I do not remember just how far from the bite of the roll, but I think it is about .017 on the long feed plate and .012 on the short.

Mr. Pegram: How does your sliver look?

Mr. Kimrey: Fine.

Mr. Pegram: What percentage of rayon are you using?

Mr. Kimrey: All rayon.

Mr. Pegram: You are not getting any shiners or anything like that?

Mr. Kimsey: I should say, I guess, that we are on nubby yarn, but we are not having any trouble whatsoever.

Mr. Pegram: The next part of this question is how to handle cut fibers on drawings.

S. S. Holt: Is there any difference in the speed of the rayon running and the regular cotton, 15/16" and 1"— the licker-in speed?

Mr. Cobb: Back in the early days a lot of testing was done on that. The closer you get to 200 R.P.M., instead of 440 (which you are probably using now), or in that neighborhood, the better breaking strength you can get. It is a mean job to lower the licker-in speed to 200, on account of the size of the pulley you have to put on. We know, however, that a low licker-in speed will give better breaking strength.

Mr. Pegram: Do you lower the licker-in speed in proportion to the length of the staple?

Mr. Cobb: No, sir. The mills that are doing it are trying to get the speed down to 260 or 240. The closer the licker-in to the feed plate the better.

Mr. Rabb: We have experimented with speeds up and down and have found that with from 250 to 350 we get the best breaking strength. We have found the best speed is 320 for the licker-in. We think 200 is a little low. We have found around .016 is the best setting on the feed plate, to give you the best breaking strength. If you can get a good lap and the speed roll is properly weighted I do not see why you should take off chunks unless you run an extremely heavy lap. That might make you take off chunks.

Mr. Pegram: What is the weight of your lap?

Mr. Rabb: 12½.

Mr. Pegram: What staple?

Mr. Rabb: 1½".

Mr. Holt: We did not make any changes on the drawings.

Mr. Pegram: Does anyone make any changes on drawings? What length staple do you change your drawing settings on?

Mr. Inscoe: We have changed them so much I don't know. Of course on our blends, of which I was speaking just now, 1" viscose rayon mixed with cotton, we did not change our settings at all. That was mixed with ⅞" and 15/16" cotton. We did not have to change our settings at all. As you go up to longer staples on rayon you have to spread your rollers.

Chairman Jennings: Say you are going to spin 1⅛"?

Mr. Inscoe: What length cotton?

Mr. Jennings: Well, 1⅛".

Mr. Inscoe: You mean 1⅛" cotton and 1⅛" rayon?

Mr. Jennings: Yes.

Mr. Inscoe: Well, we do not run 1⅛" cotton. I don't know. We run 1" cotton and 1" rayon. We have not been able to run 1½" on our drawing successfully. We have not been able to open our rolls up enough, or something.

Chairman Jennings: He gave us 2, 2⅛, and 2¼. I have the diagram he gave me.

Mr. Inscoe: That was on the four-roll drawing?

Mr. Jennings: Yes, sir.

Mr. Inscoe: We have the five-roll drawing, and I have not been able to get it spaced right, or for some other reason have not been able to make it run successfully. Besides that, we have had quite a bit of trouble in having it lap up on the steel roll.

Chairman Jennings: Which roll does it lap on?

Mr. Inscoe: The second roll.

Mr. Jennings: I have now just gone through a little period of that, on cotton. If you will lower your break draft there a little bit between the back and third rolls that will stop a great deal of your lapping up.

Mr. Pegram: Mr. Cobb, could you give us any information on that?

Mr. Cobb: We recommend, on 1½" staple, one tooth over the staple. Add a tooth and keep on increasing, and do that each time as you increase the length of the staple. That is being used fairly widely. Some mills try to set a little closer, but staple lengths vary more than that.

Chairman Jennings: Yes, sir. Sometimes you get 2" in 1⅛".

Mr. Pegram: Let's take up the last part of this question, which is how to handle cut staple on fly frames. I see here Mr. Lindsay, of the Saco-Lowell Shops, and I am going to ask him what he knows about that. He runs around in this section a lot. Mr. Lindsay, tell us what you know about setting rolls on rayon.

R. E. Lindsay, Saco-Lowell Shops, Charlotte, N. C.: I do not know much about rayon. I could not answer any technical questions correctly. After listening to this discussion this morning I might say that there is being made a picker with a special carding beater (that is, it has a special pin) for rayon. The beater turns up instead of down. It is necessary to set the bottom feed roll back behind the top feed roll in order to get a closer setting. There has also been developed a card for rayon without any flats. It has rolls on the top covered with wire. That is doing a very good job.

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On drawing we do have to set our rolls wider with rayon than on cotton. I have a basic setting here which might be used to start off. On rayon we set from the first to the second roll 5/32" to 1/8"; from the second to the third, 5/16" to 3/8" from the third to the fourth, 3/4" to 9/16". We also find it is necessary sometimes to use a different roll stand, so as to give room to set the rolls wider. Instead of a No. 1 roll stand on the drawing frame you may have to use a No. 2 roll stand. That is also true, I think on, the roving frame, especially with long staple. Beyond 1-9/16" I think you have to have a different roll stand, so as to get wider space to take care of the long staple. That is being used in mills today that are using the longer staple.

I might also say that there has been developed a different form of spinning frame especially for long-staple cotton and rayon. That, too, is being used successfully.

As I say, I do not know enough about rayon to answer any technical questions, but I shall be glad to talk with any of the men after the meeting or at any other time if we can be of any help at all.

Proper Twist for Various Blends

Mr. Pegram: We will now take up Question No. 4. That reads: *"How do you arrive at getting the proper twist on different blends of fibers? The proper draft?"* That is on the spinning. Mr. Alexander, could you give us any information on the proper twist on a 25 per cent blend of rayon and cotton?

C. W. Alexander, Overseer Spinning, Erwin Cotton Mills Co., No. 3, Cooleemee, N. C.: No, sir. We have had some of that blend, maybe 25 per cent dyed cotton. On the filling we might go as high as 4.00. What twist is proper I do not know. With 100 per cent rayon we run on the warp 3.75; on the filling, 3.25. Whether that is the proper twist or not I do not know.

Chairman Jennings: What length rayon?

Mr. Alexander: 1½".

Mr. Pegram: What drafts would you use?

Mr. Jennings: I would say use normal drafts.

Mr. Pegram: Is anybody using different drafts? (No response.)

Let's go to Question No. 5. *"What is the best relative humidity for spinning and weaving these blends?"* Has anyone anything to say on the proper humidity in the spinning room on rayon blends?

Mr. Cobb: Let's hear from Mr. Hope.

Mr. Pegram: Mr. Hope, of Erlanger, can you give us any information on that?

Mr. Hope: We have not run any rayon and cotton blends. We have run viscose. We run about 55 on the spinning and 75 on the weaving.

Mr. Pegram: We run about 55 in our spinning at Cooleemee.

There is just one more question here that was sent in this morning and asked to be discussed. That reads as follows: *"Suppose that you are making a piece of cloth of rayon construction and getting a perfect piece of goods, and then you change your rayon—that is, the length of* *the fiber, the denier and counts remaining the same. What effect would it have on the cloth, if any? Would it streak filling-wise? If so, why, and what would be the remedy?"* Mr. Cobb, I hate to impose on your good nature, but can you give us some information on that?

Mr. Cobb: As I understand that, the only change made in the fiber is to change the staple length from longer to shorter?

Mr. Pegram: Yes, sir.

Mr. Cobb: I think you would get filling bands right off, for this reason. Suppose you had ½" and changed to 1¼", the 1¼" yarn would be far fuzzier than the 1½". That is just one reason. You have more fuzz on the 1¼"—have more covering power. If you change to 1½" you have less fuzz.

Mr. Rabb: I think the entire set-up would have to be changed if you change the length of the fiber.

Mr. Pegram: Mr. Holt, what do you think?

Mr. Holt: I think you would have to change and make new settings, just as you did in the beginning.

Mr. Pegram: Are there any other questions? If not, I will turn the meeting back over to the Chairman.

Chairman Jennings: The Nominating Committee will now report the nominations for the two members of the Executive Committee for this Division who are to be elected at this time. These members are to take the places of Mr. R. H. Armfield, of White Oak Mills, Greensboro, whose term expires this fall, and Mr. G. H. Mehaffee, formerly of Riverside Cotton Mills, Danville, Va., who has moved from the Division.

The Nominating Committee reported the following nominations: John D. Scott, Supt., Proximity Mfg. Co., Greensboro, to succeed Mr. Armfield, and S. H. Holder, Asst. Supt., Consolidated Textile Corp., Lynchburg, Va., to succeed Mr. Mehaffee. No nominations were offered from the floor, and these two gentlemen were elected.

Mr. Hope: Mr. Chairman, the two gentlemen from the Tennessee Eastman Corp. have been quite a big help to us today, and I should like to move that we give them a vote of thanks for the information they have given us.

A rising vote of thanks was extended to Mr. Cobb and Mr. Smith, of the Tennessee Eastman Corp.

The meeting then adjourned.

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$5,000,000 Fund Set Up To Speed Export Of Cotton

Washington, D. C.—A revolving fund of $5,000,000 has been set up by the Reconstruction Finance Corp. to expedite the export of cotton from the United States.

Emil Schram, RFC president, said the fund was set up in co-operation with the Cotton Exports Corp., organized recently by 20 export firms. It will permit the exporters to obtain 80 per cent of the price of the cotton before shipment.

One of the principal problems in stimulating cotton exports, Schram said, has been the scarcity of American dollar exchange available to prospective foreign purchasers. Under the new plan, the American firm will ship the cotton immediately, but the foreign purchaser will not be permitted to take possession of it until he pays in dollars.

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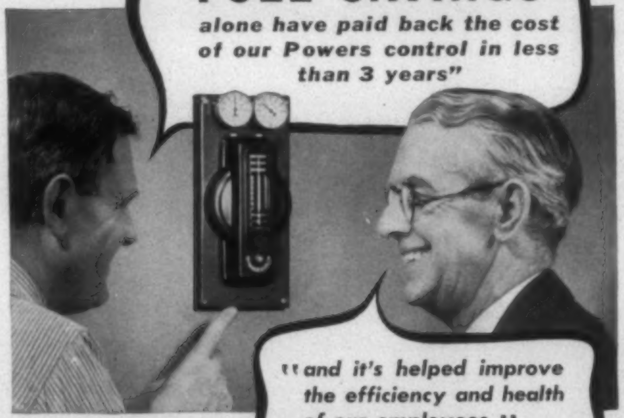

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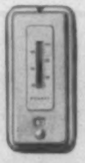
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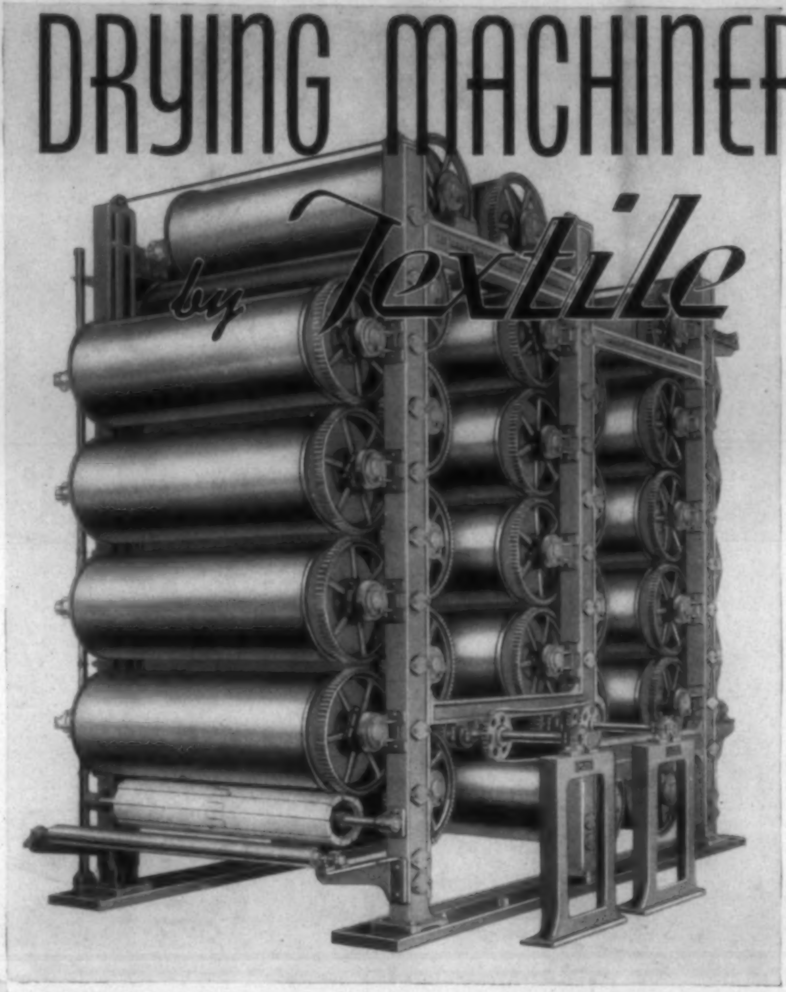

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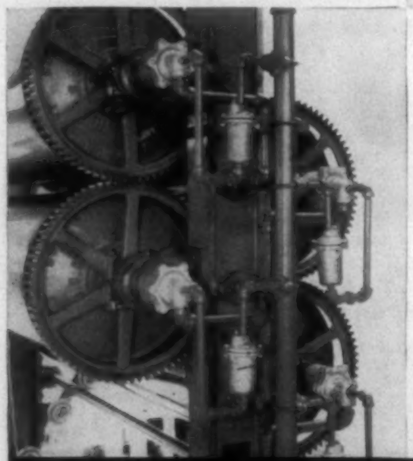

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